

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL  
RAILROAD AND FINANCIAL NEWSPAPER.

## CONTENTS.

### EDITORIAL.

Mississippi River Improvement	5
Manganese in Alabama	5
Greater Activity in the South	5
Business, Not Politics	6
A Gigantic Iron and Steel Enterprise at Tredegar, Ala.	7
Manufacture Little Things	7
A Good Showing for Southern Banks	7
Editorial Short Notes	5, 6, 7
Cultivation of Figs	43
Brick-Dust Cement	69

### RAILROAD DEPARTMENT.

Justice at Last	37
Southern Railroad Building	37
From New Berne to Wilmington	37
Various Railroad Notes	37, 43
Railroad Construction	37

### INDUSTRIAL NOTES.

Trade Notes	47, 53, 69
Illustrated Descriptions of Machinery,	53, 54, 55
Iron Market Report	70
Eastern Lumber Markets	74

### CORRESPONDENCE AND NOTES.

General Notes	8
Graham, Va., and the Work Doing There	9
Basic City and Waynesboro—"The Handsomest Place"	9
Dallas as a Money Center	10
Ivanhoe, Va.—Its Situation and Possibilities	10
Tredegar's Big Deal for a Steel Plant	11
Literary Notes	11
Safe Transportation of Perishable Articles	44

### FINANCIAL DEPARTMENT.

New Banks	38
Bonds, Stocks and Other Notes	38
Southern Stock Quotations	39

### CONSTRUCTION DEPARTMENT.

Full particulars regarding all industrial enterprises organized in the South during the past week	40-42
Burned	42
Building Notes	42
Machinery Wanted	44

VOL. XVII  
No. 23.

\$4.00 per year.  
Single Copy  
10 Cents.

Baltimore, July 12, 1890.



# Classified Index of Advertisers.

[For ALPHABETICAL INDEX WITH PAGES, SEE PAGE 77.]

- Air Compressors.**  
Ingersoll-Sergeant Rock Drill Co.  
Rand Drill Co.
- Architects.**  
Gray & Fitch.  
Raeder, Coffin & Crocker  
C. R. Makepeace & Co.  
Lockwood, Greene & Co.  
Drew, Baldwin & Co.
- Architectural Iron Work.**  
Chickasaw Iron Works.  
Manly Mfg. Co.
- Artesian Wells.**  
Cook Well Co.
- Bankers & Brokers.**  
Alex. Brown & Sons.  
N. W. Harris & Co.  
Wilson, Colston & Co.  
Jno. L. Williams & Co.  
Middendorf, Oliver & Co.  
Southern Investment Co.  
Frederic Taylor & Co.  
P. J. Goodhart & Co.  
Equitable Mortgage Co.
- Barrel Machinery.**  
(See Wood-Working Machinery.)
- E. & B. Holmes.**  
Bath Tubs.  
Haines, Jones & Cadbury Co.
- Bearings.**  
North American Metal-ine Co.
- Bells.**  
Henry McShane & Co.
- Belting.**  
Baker, Sloc & Co.  
Chesapeake Belting Co.  
Nashville Rapid Tann'g & Belt Mfg. Co.  
Gandy Belting Co.  
Chicago Rawh. Mfg. Co.  
Page Belting Co.  
Shultz Belting Co.  
Belting (Chain).  
F. H. C. Mey.  
Jeffrey Mfg. Co.  
Link Belt Engineer's Co.  
Belt Holders.  
W. R. Santley & Co.
- Blacksmiths' Tools.**  
Buffalo Forge Co.  
Fulton Iron & En. Wks.  
Holt Mfg. Co.
- Blinds.**  
Hartman & Durstine.  
Wm. Willer.
- Blocks (Tackle) & Sheaves.**  
Boston & Lockport Block Co.  
Fulton Iron & Eng. Wks.  
Western Block Co.
- Blowers and Exhaust Fans.**  
Akron Heat & Ven. Co.  
W. R. Burgess.  
Geo. F. Clark.  
Buffalo Forge Co.  
N. F. Sturtevant.
- Boat Builders.**  
Lockwood Mfg. Co.
- Boiler Fronts and Fittings.**  
Vulcan Iron Works Co.
- Boilers.**  
(See also Machinery.)  
Talbot & Sons.  
Armstrong Bros.  
W. R. Burgess.  
Fulton Boiler Works.  
Rice & Whitacre Mfg. Co.  
Oil Well Sup. Co., Lim.  
Chickasaw Iron Works.  
Porter Mfg. Co., Lim.  
Atlanta Machine Wks.  
Heine Safety Boiler Co.  
Tudor Boiler Mfg. Co.  
Vaik & Murdoch I. Wks.  
Ed. Kendall & Sons.  
Babcock & Wilcox Co.  
Hewes & Phillips Iron Works.  
Frick Co.  
Harrison Sfty. B'l'r. Wks.  
R. Munroe & Son.  
Rochester Machine Tool Wks.  
Sharon Boiler Wks., Lim.  
Geo. W. Tift, Sons & Co.  
Cleveland & Hardwick Lowell Stm Boiler Wks.  
Campbell & Zell Co.  
Taylor Mfg. Co.  
Webster, Camp & Lane Machine Co.  
E. J. Wood.
- Boiler Appliances.**  
Wm. Baragwanath & Son.  
Locke Bros.  
Austin Adams.  
Geo. A. Barrad.  
Curtis Regulator Co.  
Reliance Gauge Co.  
Stillwell & Bierce Mfg. Co.  
Mason Regulator Co.  
Hoppes Mfg. Co.  
Holler Combind.  
Litofuge Mfg. Co.
- Boiler Makers' Supplies.**  
New Doty Mfg. Co.  
Holler setting.  
Jarvis Engineering Co.  
Bolts, Rivets and Nuts.  
Hoopes & Townsend.  
Bricks.  
Washington Hydraulic Press Brick Co.  
Brick & Clay Working Machinery & Supplies.  
W. R. Burgess.  
Stevenson & Co.  
J. W. Penfield & Son.  
D. J. C. Arnold.
- Bridges.**  
Frey-Sheckler Co.  
Chambers Bros. Co.  
Fletcher & Thomas.  
C. W. Raymond & Co.  
Alar, K. Rarig & Co.  
P. L. Sward & Son.  
St. Louis Iron & Mach. Works.  
Stedman's F. & M. Wks.
- Brushes.**  
Pittsburgh Bridge Co.  
Potomac Bridge Works.
- Business Opportunities.**  
Jno. L. Whiting & Son.  
E. T. Altman.  
Tamoca.  
D. H. Talbot.  
Nat'l Typewriter Co.  
R. H. Whitney & Co.  
Jno. W. Greene.  
Beaver Lick Iron Co.  
Ingalls Iron & Coal Co.  
Murray & Stevenson.  
Chas. G. Eddy.
- Canning Machinery.**  
Cleveland Gas Mach. Co.  
Nias Stamp'g & T'Co.  
Warfield Mfg. Co.
- Card Clothing.**  
(See Textile Machinery and Supplies.)
- Cars.**  
(See R. R. Equipment and Supplies.)
- Castings.**  
A. Whitney & Sons.  
Knoxville Car Whl. Co.  
Chester Steel Cast'g Co.  
Cast'g's (Brass, &c.)  
Thos. J. Delany & Co.
- Car Wheels.**  
Knoxville Car Whl. Co.  
A. Whitney & Sons.  
Russell Wm. & Found Co.  
Car Wheels Equip-ment.  
Geo. Place.
- Chemist.**  
Ottens & Westenhoff.  
J. H. Pratt.  
Stein & Schwarz.
- Cloth Folders.**  
W. A. Richardson & Co.  
Clutches (Print'n.)  
Hill Clutch Works.  
The Moore & White Co.  
Eclipse Wind Eng. Co.
- Construction Companies.**  
Miller & Bierce.  
Simpkin & Hillyer.
- Contractors' Supplies.**  
Con't'g Plant Mfg. Co.  
Kilbourn & Jacobs Mfg. Co.  
Ryan-McDonald Mfg. Co.  
Stuebner & Woods.  
Contracting Engi-neers and Mach-inists.  
American Pipe Mfg. Co.  
L. N. Cox.  
Stein & Schwarz.  
Wright & Wood.  
Nier, Hart & Mitchell.  
Porter Mfg. Co., Lim.  
Miller & Bierce.  
Simpkin & Hillyer.  
Jas. P. Witherow.  
E. J. Wood.
- Conveyors.**  
Webster Mfg. Co.  
F. H. C. Mey.  
W. J. Clark & Co.  
H. W. Caldwell & Son.  
McLanahan & Stone.
- The Jeffrey Mfg. Co.**  
Link Belt Engin'g Co.  
Corrugated Iron.  
Canton Steel Roof'g Co.  
Cincinnati Corrug. Co.  
Globe Iron Roofing & Corrugating Co.  
Holton Iron Roof'g Co.  
Kanneberg Roofing Co.  
Cambridge Roofing Co.  
Wheeling Corrug'g Co.  
(See also Conveyors.)  
Campbell Cot. Com. Co.  
Miller & Bierce.  
St. Louis Iron & Mach. Works.
- Cotton Gins.**  
Talbot & Sons.  
Van Winkle Gin & Mach. Co.
- Cotton Seed Oil Machinery.**  
Chickasaw Iron Works.  
H. W. Hubbard.  
G. H. Bushnell Co.  
Van Winkle Gin & Mach. Co.  
Talbot & Sons.  
Caldwell Machine Co.  
W. F. Cahahan & Co.
- Cranes.**  
Vulcan Iron Wks. Co.  
Detroit Fdy. Equip. Co.  
Phoenix Iron Works.  
Walker Mfg. Co.
- Crushers (Corn and Cob.)**  
Waldron & Sprout.  
U. S. Wind Engine & Pump Co.
- Crushers (Ore, Stone, &c.)**  
Frisbee-Lucop Mill Co.  
Raymond Bros. Impact Pulv. Co.  
Lloyd-Broth Co.  
Bradley Fertilizer Co.  
Gates Iron Works.  
F. H. Moore.  
James Murray & Son.  
Wiswell Electric Min-ing Machinery Co.  
Stedman's F. & M. Wks.
- Dairy Supplies.**  
John S. Carter.  
R. M. Johnson.
- Derricks.**  
H. McK. Wilson & Co.  
Contract Plant Mfg. Co.  
Simmerly Derrick Co.
- Dredges & Steam Shovels.**  
Copeland & Bacon.  
Southern Equipment Co.  
Vulcan Iron Works Co.  
Drills (Prospect'g)  
Diamond Prospect'g Co.  
M. C. Bullock Mfg. Co.
- Drills (Rock.)**  
M. C. Bullock Mfg. Co.  
Diamond Prospect'g Co.  
Ingersoll-Sergeant Rock Drill Co.  
Rand Drill Co.
- Drills (Wood and Metal.)**  
W. F. & Jno. Barnes Co.  
Cleveland Twist Drill Co.  
Lodge & Davis Machine Tool Co.  
Bickford Drill Co.  
Dry Kilns.  
Standard Dry Kiln Co.  
W. R. Burgess.  
B. F. Sturtevant.  
Akron Heat & Ven. Co.  
Electric Lighting Mather Electric Co.  
L. N. Cox.  
Brush Electric Co.  
Thompson-Houston Electric Co.  
Heiser Elec. Light Co.  
Southern Electrical Supply Co.  
United Edison Mfg. Co.
- Electric Railway and Motors.**  
L. N. Cox.  
Thompson-Houston Electric Co.  
Brush Electric Light Co.  
Electrical Engi-neers.  
C. S. Van Nuis.
- Electrical Supplies.**  
United Edison Mfg. Co.  
Southern Electrical Supply Co.
- Elevators.**  
Salem Fdy. & Mch. Shop  
James Bates.  
Jeffrey Mfg. Co.  
Morse, Williams & Co.
- Emery Wheels.**  
(See Grinding and Polishing Machinery.)
- Emery.**  
(See also Machinery.)  
Rice & Whitacre Mfg. Co.  
Armstrong Bros.  
W. R. Burgess.  
Chickasaw Iron Works.  
Skinner Engine Co.  
Talbot & Sons.  
St. Louis Iron & Mach. Works.  
Lockwood Mfg. Co.  
Porter Mfg. Co., Lim.  
Chandler & Taylor.  
Oil Well Sup. Co., Lim.  
Frick Co.  
A. L. Ide & Son.  
Hewes & Phillips Iron Works.  
Vaik & Murdoch I. Wks.  
W. A. Harris St. En. Co.  
Geo. W. Tift, Sons & Co.  
The J. T. Noye Mfg. Co.  
Rochester Mch. Tool Wks.
- Cleveland & Hardwick.**  
B. W. Payne & Sons.  
Russell & Co.  
Globe Machine Co.  
Gordon, Strobel & Lau-reau.  
Taylor Mfg. Co.  
Vulcan Iron Works.  
Wakefield Mfg. Co.  
Webster, Camp & Lane Machine Co.  
E. J. Wood.
- Engines (Gas.)**  
Charger Gas Engine Co.  
Otto Gas Engine Wks.  
Van Duzen Gas & Gas-o-line Engine Co.
- Engines (Kero-sene).**  
Rochester Machine Tool Works.
- Engravers.**  
J. A. J. Wilcox.  
Ryder & Dearth.
- Feed Wat'r Heater.**  
Wm. Baragwanath & Son.  
Hoppes Mfg. Co.
- Fencing.**  
Manly Mfg. Co.  
Duh & Co.
- Fertilizer.**  
Fred J. Meyers Mfg. Co.  
Ludlow Saylor Wire Co.  
Fertilizer Mchry.  
Vaik & Murdoch I. Wks.  
W. D. Dunning.
- Files.**  
Industry File Works.  
Nicholson File Co.  
Henry Diaston & Sons.  
Webster File Works.  
Western File Co.
- Flour & Grist Mill Machinery and Supplies.**  
Nordyke & Marmon Co.  
Talbot & Sons.  
Richmond City Mill Works.
- Case Mfg. Co.**  
Chas. E. Manor.  
B. F. Starr & Co.  
H. W. Caldwell & Son.  
Rome Foun. & Mch. Co.  
Waldron & Sprout.  
Geo. J. Fritz.
- Foot-Power Machinery.**  
W. F. & Jno. Barnes Co.  
H. L. Shepard.  
Sebastian-May Co.
- Forces Pumps.**  
Mast, Foos & Co.  
F. E. Myers & Bro.  
Superior Machine Co.
- Forges.**  
Buffalo Forge Co.  
B. F. Sturtevant.  
Miner & Peck Mfg. Co.  
Bradley & Co.  
Empire Port. Forge Co.  
Allentown F. & Mch. Co.  
Knoxville Car Whl. Co.  
Jas. P. Witherow.
- Friction Cones.**  
Evans Frict'n Cone Co.  
Fruit Evaporators American Mfg. Co.
- Furnace Builders.**  
Gordon, Strobel & Lau-reau.  
Jas. P. Witherow.  
Stein & Schwarz.
- Furnace for Boilers.**  
Foandry & Mch. Depart.  
Harris'g Car Mfg. Co.  
Jarvis Engineering Co.
- Furnace Supplies.**  
Byram & Co.  
Lowe & Tucker.  
Grant McNell.
- Gas Machines and Appliances.**  
Cleveland Gas Mch. Co.  
Detroit Heat'g & Light-ing Co.  
American Gas Sav'g Co.  
Penna. Globe Gas Light Co.
- Gauge Glass.**  
Pancoast & Maule.
- Grain Elevator Supplies.**  
H. W. Caldwell & Son.
- Grate Bars.**  
N. E. Roller Grates.
- Grinding and Polishing Machinery.**  
Springfield Em'y Wheel Mfg. Co.  
Waltham Emery Wl. Co.  
Northampton Emery Wheel Co.  
Norton Emery Wheel Co.
- Hammers (Steam and Hand.)**  
Long & Allistatter Co.  
Beld Machine Co.  
Bradley & Co.  
Knoxville Car Whl. Co.
- Handle Mchry.**  
(See Wood-working Machinery.)
- Hardware Specialties.**  
American Screw Co.  
Belden Mch. Co.  
Heesen Bros. & Co.  
Empire Port. Forge Co.  
Fred J. Meyers Mfg. Co.  
Van Wagoner & Wil-liams Co.  
Cronk Hanger Co.  
Wier & Wilson.  
Cover Mfg. Co.
- Hay Tools.**  
F. E. Myers & Bro.  
U. S. Wind Engine & Pump Co.
- Heating Apparatus.**  
W. R. Burgess.  
Pierce, Butler & Pierce Mfg. Co.  
Akron Htg. & Ven. Co.  
Detroit Heat'g & Light-ing Co.  
D. F. Morgan Boiler Co.  
B. F. Sturtevant.
- Holisting Machinery.**  
Rice & Whitacre Mfg. Co.  
Jno. F. Byers.  
Morris Co. Mch. Co.  
M. C. Bullock Mfg. Co.  
Contractors' Plt. Mfg. Co.  
Copeland & Bacon.  
Ed. Kendall & Sons.  
Diamond Prospect'g Co.  
Knoxville Car Whl. Co.  
Vulcan Iron Works Co.  
Ryan-McDonald Mfg. Co.  
Webster, Camp & Lane Machine Co.
- Chain Hoist.**  
E. Harrington, Son & Co.  
Boston & Lockport Block Co.
- Rope Hoist.**  
Fulton Iron & En. Wks.  
Palmer, Cunningham & Co., Limited.
- Hose.**  
Waterbury Rubber Co.  
Hydrants.  
Ludlow Valve Mfg. Co.
- Hydraulic Machinery.**  
Watson & Stillman.
- Ice-Making Machinery.**  
Atlanta Machine Wks.  
Castle Engine Works.  
Consolid'd Ice Mch. Co.  
King Ref. & Ice Mch. Co.  
Hercules Iron Works.  
Richmond Ice Mch. Co.  
Sulzer-Vogt Mch. Co.  
Frick Co.  
Arctic Ice Mch. Mfg. Co.  
Family Ice Machine.  
L. Dermigny & Co.
- Injectors.**  
Forest City Brass Wks.  
Sherwood Mfg. Co.
- Insulated Wires & Cables.**  
South. Elec. Supply Co.
- Insurance.**  
Employers' Liability As-surance Corp'n, Lim.  
Hartford St. Boiler Insp. and Insurance Co.
- Iron Working Machinery.**  
Stow Flex Shaft Co. Lim.  
E. Harrington, Son & Co.  
Lodge & Davis Machine Tool Co.  
Lathe & Morse Tool Co.  
Globe Machine Co.
- Jacks.**  
Joyce, Cridland & Co.  
Riehle Bros.
- Jacks (Hydraulic).**  
Watson & Stillman.
- Knitting Machinery.**  
Nye & Treddick.
- Laundry Machinery.**  
Geo. J. Fritz.  
The A. M. Dolph Co.
- Lights (Factory and Outdoor).**  
Keegan & Halpin.  
Industrial Light Co.  
Penna. Globe Gas Lt. Co.
- Locomotives.**  
(See also R. R. Equip'm't and Supplies.)  
Chickasaw Iron Works.  
Richmond Loc. & Mch. Wks.  
H. K. Porter & Co.  
Baldwin Loco. Works.
- Lubricants.**  
Olney Bros.  
Wm. C. Robinson & Son.
- Lumber.**  
E. B. Hunting & Co.  
Johnson, Shryock & Co.  
Thos. J. Shryock & Co.
- Machinery.**  
Allentown F. & Mch. Co.  
W. D. Dunning.  
G. H. Bushnell Co.  
Lockwood Mfg. Co.  
Box 110, Cleveland, O.  
Miner & Peck Mfg. Co.  
Nicholson & Waterman Mfg. Co.  
Thos. K. Carey & Bros.  
Christiana Mch. Co.  
Thos. K. Carey & Co.  
St. Louis Iron & Mach. Works.  
Webster Mfg. Co.  
Southern Equip'm't Co.  
M. C. Bullock Mfg. Co.  
Hill Clutch Works.  
Knoxville Car Whl. Co.  
Rome Foun. & Mch. Wks.  
Birdsall Co.  
S. C. Forsaith Mch. Co.  
R. M. Johnson.  
Warfield Mfg. Co.  
F. A. Estep.  
Stow Flexible Shaft Co., Limited.  
Foundry & Mch. Depart. of Harris, Car Mfg. Co.  
Morris Machine Wks.  
Richmond Loc. & Mch. Wks.  
Alex. K. Rarig & Co.  
Lowell Stm. Boiler Wks.  
S. Morgan Smith.  
McLanahan & Stone.  
Vulcan Iron Works Co.
- Machinery & Tools (Second Hand.)**  
J. A. Mackinnon Mfg. Co.  
N. Y. Machinery Depot  
Prentiss Tool & Sup. Co.  
L. F. Seyfert.  
S. C. Forsaith Mch. Co.  
Lowell Stm. Boil. Wks.  
G. H. Scanlan & Co.
- Mill Engineers.**  
Gray & Fitch.  
Raeder, Coffin & Crocker  
Lockwood, Greene & Co.  
C. R. Makepeace & Co.  
Drew, Baldwin & Co.  
B. F. Starr & Co.
- Mill Supplies.**  
Talbot & Sons.  
Waters & Garland.  
Milner & Kettig.  
Thos. K. Carey & Bros.  
James Smith & Co.
- Mining, Quarrying & Stone-Cutting Machinery.**  
Steam Stone Cutter Co.  
Allentown F. & Mch. Co.  
Atlanta Machine Wks.  
Ingersoll-Sergeant Rock Drill Co.  
Morris Co. Mch. Co.  
Gates Iron Works.  
Jeffrey Mfg. Co.  
St. Louis Iron & Mach. Works.  
Wiswell Electric Min'g Machinery Co.  
M. C. Bullock Mfg. Co.  
Copeland & Bacon.  
Rand Drill Co.  
Jeffrey Mfg. Co.  
Webster, Camp & Lane Machine Co.  
Lincoln Iron Works.
- Miscellaneous.**  
Corporation Book Co.  
H. H. Babcock, Treas.  
J. E. Palmer Co.  
Jno. G. Mengel & Co.  
Smith Prem't Type Co.  
Nat. Typewriter Co.  
Miller Safe & Iron Wks.
- Gormulley & Jeffrey Mfg. Co.**  
R. M. Whitney.  
Chamberlin Mfg. Co.  
Jory & Co.  
A. B. Collier.  
Frederick H. Smith.  
S. E. Crawford.  
Cleveland Axle Mfg. Co.  
Pickands, Mather & Co.  
E. DeF. Shelton.  
Terry Mfg. Co.  
American Pig Iron Stor-age Warrant Co.  
Phila. Warehouse Co.  
Eastman & Co.  
Ryder & Dearth.  
C. A. Gambrill Mfg. Co.  
The Bradstreet Co.  
Ligowsky Clay Pig'n Co.  
Bernhard Dietz.  
Frederick & Son.  
John Ryan Co.  
Ault & Wiborg.  
Record Printing House.  
Edw. Allen.  
Stillman, (Cleveland.)  
Niagara, (Buffalo.)  
Hotel Lucerne, (Salem.)  
Office Furniture.  
Frank Rhoner & Co.  
Derby & Kilmer Dk. Co.  
Terry Mfg. Co.
- Oil Cups.**  
Lunkenheimer Brass Mfg. Co.  
Sherwood Mfg. Co.
- Oils.**  
Olney Bros.  
Wm. C. Robinson & Son.
- Ore Washers.**  
McLanahan & Stone.
- Packing.**  
James Smith & Co.  
Shields & Brown Co.  
Page Belting Co.  
Jenkins Bros.
- Paint.**  
A. F. Bouton & Co.  
H. W. Johns Mfg. Co.  
Iron Clad Paint Co.  
Nubian Iron Enamel Co.  
Jos. Dixon Crucible Co.  
Chattanooga Paint Co.  
Druid Felt Co.  
N. T. Fats & Co.
- Paper Mill Machinery.**  
The Moore & White Co.  
F. H. Davis & Co.
- Perforated Metal.**  
Harrington & King Perforating Co.
- Phosphor Bronze.**  
Phosph. Bron. Smelt. Co.  
Pig Iron.
- Picks and Tucks.**  
Pickands, Mather & Co.
- Pile Drivers.**  
Vulcan Iron Works.
- Pipe (Cast Iron and Steel.)**  
American Pipe Mfg. Co.  
Annapolis Pipe Works.  
The Glamorgan Co.  
Jackson & Woodin Mfg. Co.
- Pipe Hand'g Wks.**  
Jas. D. Cardell & Co.
- Pipe Covering.**  
Shields & Brown Co.
- Pipe Handling Tools.**  
Pancoast & Maule.  
D. Saunders' Sons.
- Pipe Fittings.**  
Pancoast & Maule.
- Plumbers' Supplies.**  
Diles & Tools.  
Stewart Ceramic Co.  
Locke Bros.  
Milner & Kettig.  
Haines, Jones & Cad-bury Co.
- Pancoast & Maule.**  
D. Saunders' Sons.  
Pressures (Power.)  
Miner & Peck Mfg. Co.  
Boomer & Boschert Press Co.
- Pulleys, Shafting and Hangers.**  
P. Prybilla.  
Atlanta Machine Wks.  
W. R. Burgess.  
Webster & Comstock Mfg. Co.
- Van Winkle Gin & Mach. Co.**  
Fitzsimons & Co.  
Thos. K. Carey & Bros.  
Union Drawn Steel Co.  
Menasha Wood Split Pulley Co.  
Warfield Mfg. Co.  
Lane & Bodley Co.  
Taper-Sleeve Pul. Wks.  
James Smith & Co.  
Eclipse Wind Eng. Co.  
Hill Clutch Works.  
Chat. W'd Split Pul. Co.  
Webster, Camp & Lane Machine Co.  
E. J. Wood.
- Pulley Covering.**  
Nat. Pul'y Covering Co.
- Pumps (Hand and Power.)**  
Gould Mfg. Co.  
Silver & Deming Mfg. Co.  
Van Winkle Gin & Mach. Co.  
U. S. Wind Engine & Pump Co.  
Pumps (Steam.)  
Eclipse Pump Mfg. Co.  
Barr Pump'g Engine Co.
- Van Duzen & Tift.**  
Cook Well Co.  
Deane S. P. Co.  
Goulds Mfg. Co.  
John Maslin & Son.  
Hy. R. Worthington.  
Hughes Steam Pump Co.  
Pulsometer Stm. P. Co.  
Valley Pump Co.  
Dean Bros. Stm. P. Wks.  
Blakeslee Mfg. Co.  
Laidlaw & Dunn Co.  
Geo. F. Blake Mfg. Co.  
Irvin Van Wile.  
The A. S. Cameron Sim. Pump Works.  
Jno. H. McGowen & Co.  
The Smith & Valle Co.  
Buffalo Stm. Pump Co.  
Rumsey & Co., (Lim.)  
Boggs & Clarke.
- Punching and Shearing Machinery.**  
New Doty Mfg. Co.  
Long & Allistatter Co.
- Railroads.**  
Cleveland & Canton R. R.  
Pittsburgh & L. E. R. R.  
C. M. & St. P. R. R.  
Piedmont Air Line  
C. L. & W. R. R.  
Old Kentucky Route.  
Shenandoah Valley R. R.  
Western Md. R. R.  
Cin. Ham. & Dayton Rd.  
E. Ten. & Vir. & Georgia  
Wheeling & L. Erie Ry.  
Valley Railway.
- Railroad Equip'm't and Supplies.**  
(See Second Hand.)  
Corey Car & Mfg. Co.  
Jackson & Woodin Mfg. Co.
- Benj. Watson.**  
Thos. K. Carey & Bros.  
Dyott & Co.  
R. T. White.  
Robinson & Orr.  
Humphreys & Sayce.  
N. Y. Equipment Co.  
Carlisle Mfg. Co.  
Richmond Loc. & Mch. Wks.
- H. K. Porter & Co.**  
Penna. Steel Co.  
Baldwin Locomo. Wks.  
Wm. Minnigerode.  
Wm. Ladd.  
P. A. Eegp.  
Lowe & Tucker.  
Russell Wm. & Fdy. Co.  
Reginald Canning & Co.  
A. S. Maies & Co.  
O. W. Child & Co.
- Real Estate.**  
(See also Towns.)  
J. A. Hoover.  
F. I. Chapman.  
Real Estate Invest. Co.  
Jno. C. Field.  
Southern Invest'm't Co.  
R. K. Wright, Jr.  
Kearseley, Barclay & Crockett.  
Munson & Bro.  
I. H. Wiley.  
Edmonds & Robinson.  
"War" Robertson.  
Standard Land Co.
- Road Rollers.**  
Foudry & Mch. Depart. of Har'g Car Mfg. Co.
- Roll'g Mill Mchry.**  
Lloyd-Broth Co.
- Roofing.**  
H. W. Johns Mfg. Co.  
Globe Iron Rfg. & C. Co.  
Cinclin. Corrugating Co.  
Ehret-Warren Mfg. Co.  
Empire Paint & Rfg. Co.  
Canton Steel Roof'g Co.  
W. J. Burton & Co.  
Corr'ght Met. Roof. Co.  
Syke. Iron Roofing Co.  
Kanneberg Roofing Co.  
Holton Iron Roofing Co.  
Cambridge Roofing Co.  
The Berger Mfg. Co.  
Lowe & Tucker.  
Merchant & Co.  
Frank Randal.  
Wheeling Corrug'g Co.
- Rubber Goods.**  
Waterbury Rubber Co.
- Rustless Iron.**  
Wells Rustless Iron Co.
- Saws.**  
(See also Woodworking Machinery.)  
Wheeler, Madden & Clemson Mfg. Co.  
W. F. & John Barnes Co.  
Canton Saw Co.  
Chattanooga Saw Wks.  
Per. Gerlach & Co.  
Henry Diaston & Sons.
- Saw Mill Machinery.**  
W. E. Hill & Co.  
W. R. Burgess.  
Manly Mfg. Co.  
G. H. Scanlan & Co.  
Chickasaw Iron Works.  
Frick Co.
- Richmond Mch. Wks.**  
A. C. Powell & Son.  
Taylor Mfg. Co.
- Scales.**  
Buffalo Scale Co.  
Jones of Birmingham.  
Osgood & Thompson.  
Riehle Bros.
- Scroll Saws.**  
H. L. Beach.  
W. F. & John Barnes Co.
- Sewerage Con-tractors.**  
Nat'l Sewerage & Sew-age Utilization Co.
- Sheet Metal Work-ing Machinery.**  
Niagara Stamping and Tool Co.
- Shingle and Steam Machinery.**  
(See Woodworking Machinery.)
- W. E. Hill & Co.**  
Skylights.  
E. Van Noorden & Co.  
Valle & Young.
- Snap-makers' and Butchers' Machinery.**  
H. Wm. Dapp & Son.  
Stand. H'p.  
Sharon Boiler Wks., Lim.  
Porter Mfg. Co., Lim.
- Steamers.**  
Bay Line Steamers.  
Baltimore, St. & Light Co.  
Detroit & Cleveland Steam Navigation Co.  
Goodrich Transport Co.  
Tolchester Co.
- Steel Separators.**  
Geo. A. Barrad.
- Steel.**  
Curtis Regulator Co.  
Chas. Burgess.  
(See also R. R. Equip'm't and Supplies.)  
Penna. Steel Co.  
Benj. Watson.
- Testing Machines.**  
Standard Scale Co.  
Riehle Bros.
- Textile Machinery and Supplies.**  
Schaum & Uhlinger.  
Brown Bros. & Co.  
Thaddeus S. Cobb & Co.  
James Smith & Co.  
Nye & Treddick.  
American Supply Co.  
Jeremiah Clark.  
Crompton Loom Wks.  
Globe Machine Works.  
Geo. Draper & Sons.  
W. A. Richardson & Co.  
Whitinsville Spinning Ring Co.  
Geo. F. Clark.  
Green & Wood Mfg. Co.  
J. A. V. Smith.
- Textile Machinery (Second Hand.)**  
Thaddeus S. Cobb & Co.  
L. Godfrey & Co.
- Tires.**  
Standard Steel Works Tools (Machine & Hand).  
Belden Mch. Co.  
Nicholson & Waterman Mfg. Co.
- Stevens Arms & T'Co.**  
Stow Flexible Shaft Co.  
D. E. Whiton Mch. Co.  
Cleveland Tw. Drill Co.  
Lath & Morse Tool Co.  
E. Harrington Son & Co.  
Lodge & Davis Machine Tool Co.
- Tool Co.**  
Sebastian-May Co.  
Thos. K. Carey & Bros.  
Phentias Tl. & Sup. Co.  
Fulton Iron & En. Wks.  
W. F. & Jno. Barnes Co.  
H. L. Shepard.  
Pancoast & Maule.  
Standard Tool Co.
- Towns.**  
Big Stone Gap, Va.  
Ivanhoe, Va.  
Bedford City, Va.  
Laredo, Texas.  
Mineral City, Va.  
Luray, Va.  
Kimball, Tenn.  
Tacoma, Va.  
Tredegar, Ala.  
Cardiff, Tenn.  
Greensboro, N. C.  
Sumter, S. C.  
Graham, Va.  
Glasgow, Va.  
Dallas, Texas.  
Rockwood, Tenn.  
Shelfield, Ala.  
Waynesboro, Va.  
Bessemer, Ala.  
Salem, Va.  
Denison, Tex.  
Middleborough, Ky.
- Trucks.**  
Chickasaw Iron Works.
- Valves.**  
Locke Bros.  
Ashton Valve Co.  
Curtis Regulator Co.  
Lunkenheimer Brass Mfg. Co.
- Mason Regulator Co.**  
Ienkins Bros.  
Ludlow Valve Mfg. Co.
- Veneer Cutting Machines.**  
(See Woodworking Machinery.)
- Ventilators.**  
Geo. F. Clark.  
Merchant & Co.  
Akron Htg. & Ven. Co.  
E. Van Noorden & Co.  
Cheney & Hewlett.
- Watchman's Clocks.**  
Cleve. Elect. Mfg. Co.  
Bundy Mfg. Co.
- Water Closet.**  
Haines, Jones & Cad-bury Co.
- Water Motors.**  
Warfield Mfg. Co.
- Water Wheels.**  
T. C. Alcott & Son.  
Allentown F. & Mch. Co.  
Christiana Mch. Co.  
Jas. Leffel & Co.  
Rodney Hunt Mch. Co.  
Rome Fy. & Mch. Wks.  
(Continued on Page 77)



# CORD CLOTHING. JAMES SMITH & CO. Woolen Machinery.

PHILADELPHIA, Manufacturers of PENNSYLVANIA.



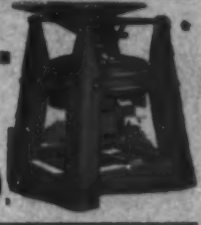
## Milling Outfits for Flour and Meal.

WE MAKE ROLLS AND PORTABLE MILLS COMPLETE.

Manufactory Established in 1851.

Pamphlets with Prices Mailed Free.

NORDYKE & MARMON CO., INDIANAPOLIS, IND.



## ELEVATORS

MORSE ELEVATOR WORKS.

MORSE, WILLIAMS & CO. Successors to CLEM & MORSE.

Manufacturers and Builders of HYDRAULIC STEAM, BELT and HAND-POWER PASSENGER and FREIGHT ELEVATORS.

With most approved Safety Devices. Dumb-Walters, Automatic Hatch-Doors, &c.

Office, 1105 FRANKFORT AVE.; Works, FRANKFORT AVE., WILDEY AND SHACKANAXON STREET, PHILADELPHIA, PA.

Send for Illustrated Circulars.

Branch Office, 108 Liberty St., New York.

BOSTON, REED & CO., 3 & 5 German St., Agents for Baltimore.

Boston Office, 14 High St.

## MINING, TUNNELING AND QUARRYING MACHINERY.

The New Ingersoll-Sergeant Air Compressors.

GADDERS, **ROCK DRILLS**, QUARRY BARS.

STONE CHANNELING MACHINES

COAL MINING MACHINES.

Send for complete priced catalogue of Mining, Tunneling and Quarrying Machinery.

INGERSOLL-SERGEANT ROCK DRILL CO.,

10 Park Place, New York.



TRADE MARK.

## Southern Electrical Supply Co.

HEADQUARTERS FOR

Electrical Goods of all Kinds, from a Wire Staple to a Dynamo.

Okonite Wire Cables and Tubing. Candee Weather-Proof Line Wire. Okonite and Manson Tapes.

Write for Catalogues.

823 Locust Street, bet. 8th & 9th, St. Louis, Mo.

## The LARGEST DRY KILN in the WORLD



WAS ERECTED BY THE STANDARD DRY KILN CO., Louisville, Ky.

For the KENTUCKY UNION LUMBER CO., Clay City, Ky.

It consists of 20 Rooms, 18-85x17x9 and 7-185x17x9 feet.

Send for CATALOGUE containing numerous testimonial letters which demonstrate that "THE STANDARD" is the MOST PRACTICAL AND EFFICIENT "BLOWER KILN" made.

Low Prices. Easy Terms. Satisfaction Guaranteed. Payment contingent on fulfillment of Guarantee. Estimates and Plans sent on application.

The Standard Dry Kiln Co.

PATENTERS AND SOLE MANUFACTURERS,

1224 to 1230 West Main Street,

LOUISVILLE, KY.

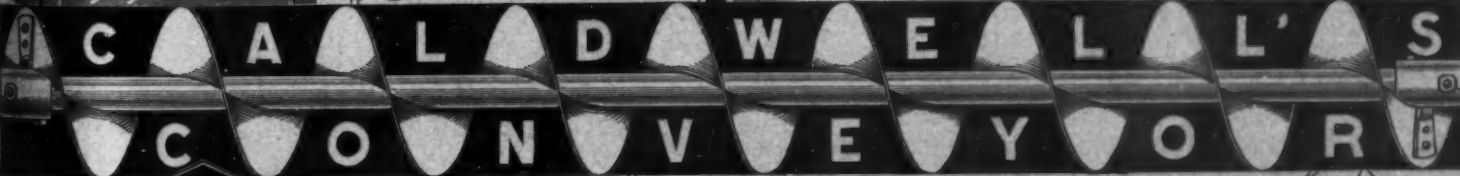
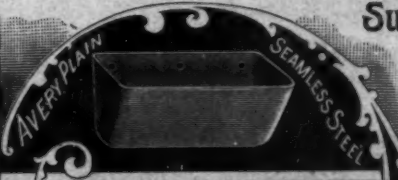
Supplies for

• FLOUR MILLS, GRAIN ELEVATORS

COTTON SEED AND LINSEED OIL MILLS

SUGAR REFINERIES, STARCH AND RICE MILLS etc.

CEMENTWORKS.



FOR SALE. 300 to 500 tons of Selected Second-Hand 40-lb.

IRON RAILS

For Relaying for Immediate Shipment. Delivery in Michigan on G. R. & I. R. R. Write us if you wish to buy.

Robinson & Orr, 410 Wood St., Pittsburgh, Pa.

BUFFALO SCALE CO., Buffalo, N. Y. Headquarters for RAILROAD TRACK SCALES and all other Scales.



# THE DEANE STEAM PUMP CO.

Steam and Power Pumps  
For all Purposes.

HOLYOKE, MASS.

Morton, Reed & Co.  
AGENTS, BALTIMORE, MD.

NEW YORK.

BOSTON.

CHICAGO.

Water Works Engines

PHILADELPHIA.

ST. LOUIS.

A SPECIALTY.

Send for Illustrated Catalogue.

Birmingham Office and Warehouses:

No. 6 SOUTH 20th STREET

## WORTHINGTON STEAM PUMPS

SOUTHERN SELLING AGENTS:

THOS. C. BASSHAW & CO., Baltimore, Md.  
KENTUCKY MACHINERY CO., Louisville, Ky.  
FERRY MACHINE WORKS, Nashville, Tenn.  
LIVERMORE FDRY. & MACH. CO., Memphis, Tenn.  
FORSBERG & MURRAY, Washington, D. C.

SEND FOR ILLUSTRATED CATALOGUE

HENRY R. WORTHINGTON  
NEW YORK.

SOUTHERN SELLING AGENTS:

SMITH & COURTNEY, Richmond, Va.  
MECKLENBURG IRON WORKS, Charlotte, N. C.  
E. V. WHITE & CO., Norfolk, Va.  
M. SCHWARTZ & CO., New Orleans, La.  
F. W. HEITMANN & CO., Houston, Texas.

Boston

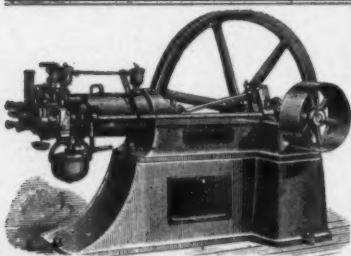
Philadelphia

Chicago

St. Louis

St. Paul

San Francisco



Over 18,000 in use. **OTTO GAS ENGINE**

30 to 70 per ct. less Gas Consumption than ANY OTHER ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started Instantly by a Match it gives full power immediately. When Stopped all Expense Ceases. GUARANTEED TO CONSUME 25 TO 75 PER CENT. LESS GAS THAN ANY OTHER GAS ENGINE DOING THE SAME WORK.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by Insurance Companies. UN-  
SURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes, 1 to 25 Horse-Power.

Branch Office, 151 Mon-  
roe St., Chicago, Ill.

**OTTO GAS ENGINE WORKS, Schleicher, Schumm & Co.**

33D AND WALNUT ST.  
PHILADELPHIA, PA.

**GEO. DRAPER & SONS, of Hopedale, Mass.**

SELL THE

Highest Grade of **T**wisters, **W**arpers and **S**poolers.

SOUTHERN AS WELL AS NORTHERN MILLS REQUIRE THE HIGHEST GRADE.

THEY ARE CONSTANTLY INTRODUCING IMPROVEMENTS IN ALL LINES OF COTTON MACHINERY.

**Shafting, Hangers and Pulleys** { For Mills and Factories of every description.

**Flour and Corn Mill Outfits Complete.** { Highest Product

Over 1,000 of our Roller Mills in use. Over 8,000 of our Portable Grist Mills in use. { Guaranteed.



**We offer a Complete Mill and Sheller for \$115.00**

Adapted to any kind of power. A boy can run and keep it in order.

**NORDYKE & MARMON COMPANY, INDIANAPOLIS, IND.**



Correspondence Solicited.

Write for pamphlet, "Mills and Milling."

For SUCTION, WATER, STEAM, GAS, AIR, ACIDS and for every purpose to which a Hose can be applied.

**SPHINCTER GRIP** ARMORED PAT. 1882, '85, '86, '88.

RESISTANCE to Great Pressure; Unobstructed Flow of Water; Increased Flexibility and Perfect Protection are some of its Advantages.

WE GUARANTEE every foot sold to withstand constant service for such longer period as to render its actual cost much less in the end. Every wind of the wire can be cut without loosening or uncoiling.

The making, vending or use of any SERVICEABLE ARMORED WIRE-BOUND HOSE not of our manufacture is an infringement on one or more of our patents, and any violation will meet with instant prosecution. Brass plates mark each coil and admonish infringers, whether evil-minded or ignorant.

**WATERBURY RUBBER COMPANY,**

Sole Manufacturers and Proprietors,

49 WARREN STREET,

NEW YORK

**THE EMPLOYERS' LIABILITY ASSURANCE CORPORATION, Limited**  
OF LONDON, ENGLAND.



Trustees for the United States:

OLIVER W. PEABODY, Esq.,  
KIDDER, PEABODY & Co., Boston.  
CHAUNCEY M. DEFEW, Esq.,  
Pres. N. Y. Cen. and H. R. R. Co., New York.  
SAMUEL SLOAN, Esq.,  
Pres. Del., Lacka. and West. R. R. Co., New York.  
WM. A. FRENCH, Esq., Pres. Mass. National Bank.  
ABRAHAM FRENCH Co., Boston.  
HON. JOHN LOWELL, Boston.

Deposited in United States,

\$700,000.00.

Policies issued giving full protection to Employers against loss by Claims from Employees on account of Accident. Rates Proportioned to Risks of Occupation. One Premium the only Payment during year. No Contingent or other Liability on part of Employer.

Employers with Pay Rolls of \$103,000,000 already covered in United States. No Employer should be without this Protection. Cases investigated by Competent Inspectors and considered by Eminent Counsel. If liability shown, Claims settled without litigation.

ENDICOTT & MACOMBER, Managers for the United States,

71 KILBY STREET, BOSTON.

AGENTS—SAMUEL APPLETON, 25 Central Street, Boston; KIRBY & DWIGHT, 31 Cedar Street, New York; MIDDLE DEPARTMENT, TATTNALL PAULDING, Manager, 416 and 420 Walnut Street, Philadelphia; G. W. S. HALL, 413 Second Street, Baltimore, Md.; GEO. A. GILBERT, 226-228 LaSalle Street, Chicago; F. D. HIRSHBERG & BRO., 120 N. Third Street, St. Louis.

Send for New Catalogue

**SUPERIOR WOOD-WORKING MACHINERY** to CONNELL & DENGLE, Rochester, N. Y.



D

Co

S

TS:

N. C.

WOO

to Ga

man

DRINK

9900

a. UN

wer,

STB

PA.

rs.

ories

on,

F

A

let

Milling

COUN

violat

whit

Y,

ORK

ted

o.

,000,000

employ

s Inves

nsidered

Claim

ON.

at Street

or. N.Y.







# MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

VOL. XVII. No. 23.  
WEEKLY.

BALTIMORE, JULY 12, 1890.

\$4.00 A YEAR.  
SINGLE COPIES, 10 CENTS.

## Manufacturers' Record.

PUBLISHED EVERY SATURDAY BY THE  
MANUFACTURERS' RECORD CO.

President, Secretary and Treasurer,  
RICHARD H. EDMONDS, WM. H. EDMONDS.

RICHARD H. EDMONDS, EDITOR.  
WM. H. EDMONDS, BUSINESS MANAGER.

THOMAS P. GRADY, Southern Staff Correspondent.

OFFICE,  
COR. EXCHANGE PLACE AND COMMERCE STREET,  
BALTIMORE.

SUBSCRIPTION, - - - - \$4.00 a Year.  
To Foreign Countries, - - - 6.50 a Year.

BALTIMORE, JULY 12, 1890.

THE MANUFACTURERS' RECORD believes that the work of improving the Mississippi river and keeping it within the limits of its proper channel should be undertaken and carried on by the national government. It recognizes in the effectual regulation of this mighty stream and the prevention of its devastating floods a possible means of the development and up-building of a part of the South hitherto almost dormant that shall be, in magnitude and wealth-creating results, second only to the development and up-building of the mineral districts. As a part of its work for the advancement of the South's material interests, the MANUFACTURERS' RECORD has determined to undertake the labor of showing the immeasurable importance of effective and permanent river improvement as opposed to the piecemeal plan which has absorbed so many millions with such unsatisfactory results. The right thing in this matter is to appropriate a sufficient sum to make the Mississippi do what nature intended it to do in its dual capacity of an artery of commerce and a means of drainage for two thirds of the United States, and then have done with the question. Between a spirit of make-believe economy and the fierce conflict among

Congressmen for petty local appropriations, this great national improvement has fared so badly that a river which should be the pride of the nation is its disgrace. Not only does it fall far short of what it should be as a navigable stream, but the waters poured into it by forty-four tributaries, from New York to Idaho, from the summit of the Rockies to that of the Alleghanies, and from Canada to the Gulf, periodically overflow their banks, devastating the lower valley from Memphis to New Orleans.

The work of the MANUFACTURERS' RECORD will be aimed at popular enlightenment on this great question. We shall endeavor to do something toward arousing public sentiment so that constituencies who have looked on quietly heretofore will feel a positive interest which will be reflected by their representatives in Congress. We shall publish consecutively, from week to week, a series of articles dealing with the subject in all its important branches. We have also arranged for a supplementary series of articles which will be prepared by the ablest authorities and will be devoted to the scientific, legislative, physical and general phases of Mississippi river improvement. In addition, the MANUFACTURERS' RECORD will have correspondents in the lower Mississippi valley who will keep us directly in communication with the people and country most affected, and the results of whose investigations will prove a valuable feature of the work as outlined. Primarily, our object is to aid, as far as lies in our power, in securing a sufficient appropriation, but, incidentally, this work opens up a marvelously rich field to which we shall endeavor to attract renewed attention. After all of these articles shall have been published in our reg-

ular issues, the MANUFACTURERS' RECORD proposes to put them into book form, and we believe they will constitute the most valuable work extant on Mississippi river improvement and the resources of the lower valley.

### Manganese in Alabama.

The world has been searched for manganese and vast sums spent in trying to find sufficient to meet the demands of trade. The South is destined to supply this much needed ore and thus to add largely to its own wealth and at the same time to impress upon the iron and steel people of the world that in that section there is a combination of advantages for their business not found elsewhere in America. The writer has recently made a visit, in company with a number of well-known experts, to the manganese mines now being opened up at Tredegar, Calhoun county, Alabama, about which a good deal has recently been published in the MANUFACTURERS' RECORD, and found that their magnitude greatly exceeded what these experts had expected to find. They were astonished at the vast quantity of manganese which they saw, and we believe that every one who investigates these mines will readily admit that they must prove a source of great wealth, not only to Alabama, but to the entire South. Fortunately, adjacent to the manganese mines are iron ores of high grade sufficient in quantity to run a number of furnaces for generations without hauling a pound of ore over 5 or 6 miles, and what is believed to be the largest bluff of pure limestone in Alabama.

THE MANUFACTURERS' RECORD announces elsewhere the work it is undertaking in behalf of Mississippi river improvement. In connection with this work we have engaged Mr. Frank H. Tompkins, a journalist well and favorably known throughout the Mississippi valley, who will make a tour of that section, furnishing correspondence and data for our series of articles, and otherwise contributing to a cause which has long had his personal devotion.

### Greater Activity in the South.

A careful study of all the forces now at work tending to the development of the South will convince any one that this section is entering upon a period of greater activity than we have yet seen. The foundation work has been done. This was to convince the business world by the logic of facts that the South has the great stores of coal and iron and timber and agricultural possibilities that the MANUFACTURERS' RECORD has for ten years been proclaiming, and that the combination of advantages which it possesses for supporting a dense population by reason of its vast natural resources is greater than can be found elsewhere in America or Europe. This has all been done. Ten years ago the South was struggling to get a start; five years ago Birmingham and Chattanooga and Atlanta practically represented the industrial South, and Birmingham was regarded as about the only iron-producing center that this section was ever to have. It was less than five years ago that other towns in Alabama were established as iron-making points. Not until 1886 and 1887 and later even was there any active development to bring prominently before the public such places as Anniston, Sheffield, Bessemer and other towns that are now pushing ahead so lively. Moreover, at that time in Alabama and a small section of Tennessee centered all the development that was going on and the rest of the South was almost stationary. Now the Virginias, the Carolinas, Tennessee, Kentucky and Texas are all keeping well up with Alabama's progress, and the other States are fast getting ready to follow in the same line.

Capital no longer shuns the South. It has been demonstrated that the South can produce iron, steel, cotton goods and woodwork cheaper than any other section, and capital is pouring there very rapidly. New England was only converted a year ago or less to the South's great future, but like many other hardened sinners, it seeks now to atone for the



past by the most enthusiastic work for the South. It is true that it works for it because it expects to profit largely therefrom. But the South is getting its surplus capital and surplus energy, and towns are springing up wherever these are applied to the development of Southern resources. Old England follows suit, and many millions of her money are coming Southward and other millions will follow. Even from far off Dakota active men of brain and money are emigrating Southward in large numbers, and Kansas City, the home of the boomer, is sending many of its foremost workers into this favored land. When Dakota railroads run "home-seekers excursions" to the South, as they will do this fall and winter, commencing in August or September, it is easy to see which way the tide sets.

And so, in whatever direction we look, everything is favorable to the South. The MANUFACTURERS' RECORD has made many predictions in the past as to the South, and they have all been fulfilled. Looking over the whole field, it now predicts that the coming fall and winter will witness a wider diversity of industrial growth, more activity and more prosperity than the South or any portion of it has ever before enjoyed.

PHILADELPHIA capitalists continue to put money into Southwest Virginia enterprises very heavily. The Radford-Crane Iron Co., of which H. W. Hazard is president, and W. S. Pilling, secretary and treasurer, will build two furnaces at Radford, Va. The Crane Iron Co., of Pennsylvania, is one of the oldest and largest iron-making concerns in Pennsylvania, having been in operation since 1839, and while this company as a company is not interested in the Radford-Crane Iron Co., Mr. W. S. Pilling is secretary and treasurer of both companies, and others interested in the Pennsylvania company are also interested in the Virginia company at the same town. The Townsend-Hoopers Manufacturing Co., composed of Philadelphia people, will build a rolling mill and works to make bolts, nails, etc., while a \$500,000 company, also composed of Philadelphia capitalists, will build iron pipe works at the new town of Richlands. These are but illustrations of how practical Eastern iron men are putting their money into Southern iron enterprises.

The Evening Globe appeared in the newspaper field of Baltimore on July 1. It comes into what appears to be one of the best fields in the country for a wholesome, first-class paper, and has before it possibilities of immense success. As good as the field is, it is something of a potter's field by reputation, but with persistent energy and sufficient backing the Globe may reverse the old order of things. The paper has shown marked improvement already since its first issue, and the MANUFACTURERS' RECORD hopes it may keep it up and prove a successful venture.

### Business, Not Politics.

Now and then some long slumbering ignoramus whose horizon of intellect is bounded by the narrow limits of his own actual vision, awakens to a realization of the industrial progress of the South, and he hastens in a sort of waking nightmare to shout as loudly as his feeble voice will permit that the South is progressing too rapidly, and must be held back to the more leisurely pace of other sections of the country. A crank of this character, who cautiously conceals his identity by the *nom de plume* of "Pig-Iron," writes to the Philadelphia Press that the Lodge Federal Election Law is the measure that will relieve the North and West from the troublesome competition of Southern industries. Harken to the ravings of this idiot:

It is all very well to rejoice in the prosperity and growth of the new Northwest, for there sound views upon the tariff generally prevail, and their progress does not now interfere with ourselves; but the advance of the South is to a great extent at our expense. Her cotton mills compete with those of the New England and Middle States, and her furnaces are supplying pig iron at rates which make it impossible to run those of Pennsylvania. If the Democrats had never been allowed to regain control of the State governments of the South, Northern capital would never have embarked in the development of Southern coal and iron; and the surest and speediest way to put a stop to this competition from men who are our political enemies, as well as our commercial rivals, is to carry through and enforce measures like the Lodge Election Law. They won't like it, and some of them will be fools enough to make trouble about it; and if we can once more get them into the condition they were before 1876 we won't hear any more about cheap iron and cheap cotton goods from the South. They will have other things to think of.

It would be charity towards Mr. "Pig-Iron," whoever he may be, to spare him the mortification of having attention forcibly directed towards the effusions of his ignorance, but the currency that has been given to his communication by several other papers invites a few words from us. First of all, Mr. "Pig-Iron," you probably would have stood better in your own esteem had you not made such a conspicuous display of your ignorance of the industrial condition of the South. What may be charitably called your ideas, indicate that you, and the occasionally-appearing other critics of your kind, are grossly ignorant of the fundamental basis of the great industries that have grown up in the South. Natural resources, sir, and not politics, is the foundation of the South's industrial prosperity. While you have been slumbering the world has been moving, and the daily and weekly papers that have been circulating all about you have chronicled day by day the rise of the industries of the South. The capitalists, the bankers, the merchants, the ironmasters and the manufacturers of your own city and State have been moving to the South with their mills, their money and their invaluable experience, and, under the

guidance of their own mature judgment, they have established in the South vast industries like those that gave to Pennsylvania her industrial prosperity and supremacy, and which are now enabling the South to hold her own in competition with the North and West.

No, Mr. "Pig-Iron," your Federal Election Law, or any other political measure, will not place the South in the condition it was in "before 1876." No law that can be spread upon the statute books of this nation can sweep away the incalculable natural wealth of the South. Can national legislation destroy the great Cornwall ore-hills, or tear out the solid miles of coal in your own State? Probably not. Nor can any similar process rob Alabama, Tennessee and Virginia of their unfathomed stores of coal and iron. Can the breath of a political boss blow away the mighty pine and live-oak forests or the blossoming cotton fields of the South? Try it, sir, and see how your wind will be wasted. A trifling expenditure of energy by you in studying the character of Southern progress, and the nature and extent of the resources that nature has stored in the South, would show you that the basis of prosperity in that section of the country is something more substantial than the uncertainties of political jugglery. If you need further proof, go to some of your fellow-townsmen in Philadelphia, who have millions of capital in active operation in the South, and ask them if they based their investments in Virginia upon the democratic majorities in that State, or if they see a larger probable return upon money placed in North Carolina, because that State has three republican representatives in Congress? They will tell you "no," with emphasis, and you may also learn that two democratic Virginia senators have no more effect upon the quality of Pocahontas coke than do the two republican Pennsylvania senators upon the character of the Connellsville product.

The people of the South are far more interested in the development of their resources than in pulling political wires, and it is not their intention to permit themselves to be upset or disturbed by any political machinations. We do not wish to be understood, however, as asserting that the industries of the South are not subject to the influences of any legislation. There are vital questions of tariff and similar legislative functions that bear directly upon the industries of the South as upon those of every other section of the country, and any legislation of this character which will affect Southern manufactures will exercise a precisely similar influence in other portions of the country. So far as coal and iron are concerned, the interests of Pennsylvania and the South are identical, and any legislation that will hinder the growth of these industries in the South will have an equally deterrent

effect in Pennsylvania. The South cannot be legislated into idleness without stopping by the same law the wheels of industry throughout the land. The only course that can be followed is that of open and manly competition, and the fittest must be the winner. If Pennsylvania iron makers cannot compete on their own ground with Southern furnaces let them go down to Alabama, Tennessee and Virginia—as they are doing—and take advantage of the superior conditions that await them. If New England manufacturers cannot carry coal and cotton to Massachusetts and Rhode Island and then make fabrics in competition with Southern mills that have raw materials at their doors, they must move their mills to the South and invest their money, brains and experience in the manufacture of goods under the changed conditions. These are not new nor radical ideas; they are recognized by every intelligent manufacturer in the North. The great majority of thinking people everywhere realize that the world, and the South in particular, is moving, and that changed conditions must be met by changed methods, but an occasional ancient like this "Pig Iron" lifts a feeble voice and endeavors to call this country back into the past.

THE Boston Advertiser refers to South Carolina as the "least progressive of Southern States." The Advertiser, as usual when it refers to Southern matters, displays either ignorance or a purpose to misrepresent. South Carolina is far from being non progressive. It is rapidly pushing to the front, especially in the manufacture of cotton goods, and South Carolina mills are going to be the liveliest competitors that New England mills will have to meet. In 1880 South Carolina had 14 cotton mills with 82,334 spindles and 1,676 looms, while it now has 44 mills with 417,730 spindles and 10,687 looms. Next to Georgia it leads the South in the number of spindles, and as to the quality of the goods produced, it was only a few months ago that the Boston Commercial Bulletin stated that the Clifton Mills of South Carolina were producing such fine goods that they were being imitated by several New England mills.

AN editorial from one of our weekly exchanges in Kentucky aptly describes the growth that is taking place in almost every section and corner of the South. It says: Five years ago not one-tenth of one per cent. of the small population then in this section were skilled mechanics; to-day the population is more than double what it was then, and fully twenty per cent. of the people are masters of some trade, and yet so rapid is the growth in population that this country is crying aloud for mechanics and workmen in the different trades, beseeching them to come in among us and lend their help to the great work of making this town the prosperous one that it must be.



### A Gigantic Iron and Steel Enterprise at Tredegar, Ala.

For several months negotiations for the building of large steel works at Tredegar, Ala., formerly known as Jacksonville, have been in progress, and the Republican of last Saturday announces the closing of the contract and gives particulars of what promises to be the greatest enterprise in the entire South. A complete plant, involving every detail from the mining of the ore to its final output in the shape of finished steel, will be built at this town. The works, which will include rolling mill, steel mill, &c., will cover nearly 20 acres of ground, require 17,500,000 bricks for their construction, and when fully completed, give employment to over 3,000 men. In view of the magnitude of this, the greatest enterprise projected since the South's boom commenced five years ago, the Republican is justified in its enthusiasm over the future of Tredegar. In fact some of the most noted experts of the country, men who are thoroughly posted as to the mineral resources of America and much of Europe, have been amazed at the mineral wealth controlled by Tredegar, and one of them, who has examined the leading iron properties of this country and Europe, recently said that he considered some of the Tredegar ore properties the greatest he had ever seen in the world. Calhoun county has long been regarded as one of the richest mineral counties in the entire South, but investigations that have been made during the last four or five months have opened up a wealth of iron ores and manganese that has amazed every one. The great manganese discoveries and the new veins of high grade ore unknown until recently, because no thorough exploration had ever been made, fully justify the belief that Tredegar is destined to be one of the great iron and steel centers of the country. Without hauling a ton more than five or six miles, there is sufficient ore controlled by the people of that town to last a number of furnaces for generations to come. Moreover, this ore is of high grade, averaging between 52 and 60 per cent. metallic iron, very low in phosphorus, and can be mined at the minimum cost, while manganese is in sufficient quantity to satisfy the most exacting. With these advantages the great steel plant will mark a new era in the cheap production of steel in Alabama.

ONE of the most important events in the history of Morristown, Tenn., occurred a few days ago, when ground was broken and work began on the railroad to connect the town with Cumberland Gap. A connecting link of only forty miles is necessary, and the contract calls for the completion of the work in ten months. This new road will supply to the town cheap coal. Morristown has the ores to make it an important iron and steel manufacturing center. Cum-

berland Gap has the coal and coke. Not only does Morristown have the advantage of these cheap raw materials, but is in the heart of a virgin timber country. It is in one of the most healthy and commanding positions, and it has transportation facilities to all the leading centers of trade and manufacture.

### Manufacture Little Things.

Whatever else foreign nations may overlook of American manufactured products, they all take a fancy to and become purchasers of those little ingenious things that inventive brains have devised to facilitate domestic labor. One day recently two large ships cleared from New York, one bound for New Zealand ports, the other for Melbourne, Australia. Both ships carried miscellaneous cargoes, consisting mainly of heavy and shelf hardware and of agricultural tools and implements. With these were a goodly assortment of articles, such as curry combs, egg beaters, clothes wringers, rat traps, transom lifts, towel rollers, ice cream freezers, hog rings, apple parers, lemon squeezers, meat choppers, toy banks and toy wagons, 64 dozen fly traps, 78 dozen mouse traps, 300,000 percussion caps, etc. Of the heavy hardware, nuts, bolts, axles, pumps, fence wire, hatchets, axes and hammers, aggregated many tons, while in a single invoice were 829 packages reapers weighing 108,000 pounds. Our Antipodal customers are annually increasing their purchases of goods of this kind from the United States, although they are British colonies.

There are several things suggested by this trade. One is that as fast as the world learns that any class of American manufactured goods are better than can be bought elsewhere, then a market for them is made. Another is that those who have not had opportunities to compare American with the European goods they have heretofore used cannot be expected to buy ours. The international drummer must start from our shores and educate the world in our favor. World's fairs like those of the past in Europe do much, but the intelligent commercial traveler does more.

If the trade in small articles of American manufacture is world wide and is always increasing, would it not be wise for the South to specially encourage all such industries in its own midst? Every household supply store in the South carries in its stock hundreds of articles that ought to be made there, but that come from the North. We know this is an oft-told tale, but the MANUFACTURERS' RECORD intends to reiterate it until these small industries receive the attention their importance deserves. The South must make its own supply and thus get ready for competition in all other markets.

C. T. TRASK, Belleview, Fla., desires the address of manufacturers of splint baskets.

### A Good Showing for Southern Banks.

THE MANUFACTURERS' RECORD has dwelt upon the solidity and growth of Southern banking, because a substantial banking system is necessary to a substantial community, and is accepted as demonstrative of the soundness of commercial and industrial interests. One feature of the many-sided strength of Southern banks appears in a list of national banks, whose surplus and undivided profits exceed their capital stock, published in Rhodes Journal of Banking. Out of 3,319 national banks embraced in the system, 239 have met the conditions of the table, of which 30 are in the Southern States, as follows:

Banks.	Capital stock.	Surplus & undiv'd profits.
Weatherford, Tex., Cit'n's Nat.	\$50,000	\$202,128
New Orleans, La., National of...	250,000	679,397
Anderson, S. C., National of...	50,000	133,486
Athens, Ga., National of...	100,000	274,713
San Antonio, Texas, National...	125,000	274,617
Chattanooga, Tenn., First Nat.	200,000	430,331
Newnan, Ga., First National...	50,000	100,205
Houston, Texas, First National...	100,000	186,157
Charleston, S. C., First Nat.	200,000	366,310
Jefferson, Texas, National of...	50,000	87,864
Greenville, S. C., National of...	100,000	168,504
Greenville, Texas, First Nat.	55,000	87,244
Waco, Texas, First National...	100,000	157,339
McKinney, Texas, First Nat.	50,000	75,148
Port Deposit, Md., Cecil Nat.	100,000	149,589
Charleston, S. C., People's Nat.	250,000	320,434
Atlanta, Ga., National of...	150,000	215,297
Richmond, Va., Planters' Nat.	300,000	410,340
Cumberland, Md., Second Nat.	100,000	133,082
Hillsboro, Texas, Hill Co. Nat.	30,000	63,404
Annis, Ala., First National...	200,000	245,361
Gainesville, Texas, National of...	150,000	183,244
Knoxville, Tenn., E. Tenn. Nat.	175,000	224,247
Paducah, Ky., First National...	100,000	118,976
Knoxville, Tenn., Meigs' Nat.	100,000	115,543
Staunton, Va., National Valley	200,000	230,097
Weatherford, Texas, First Nat.	50,000	56,062
Washington, D. C., Central Nat.	100,000	110,688
Baltimore, Md., Citizens' Nat.	500,000	518,411
Newberry, S. C., National of...	150,000	152,872

THE full text of the "Pig Iron" letter, which we comment on elsewhere, is given herewith. It was addressed to the Philadelphia Press, but fell into the hands of the Philadelphia Record, through whose columns it was first made public:

To Editor Philadelphia Press:

Great injustice is done to Senator Quay and Speaker Reed in regard to the Federal Election Bill in not recognizing the indirect benefits certain to follow that measure. It will be no inconsiderable gain to the Republican party to secure its full share of representatives from the Southern States, but what is more important, there is every reason to hope that the disorders which are threatened will once more awaken the old spirit of fervid patriotism, which has always been the best inspiration of the party. A bloody massacre now and then during a close campaign would be worth thousands of doubtful votes, and though the negroes will doubtless suffer the most in any such conflict, yet "the blood of martyrs is the seed of the church." After what the Republican party has done for the race a few hundred of them might well be sacrificed in the good cause. Nor would disorder in the South be in other respects an unmixed evil. It would probably give occupation to an army now rusting in inglorious peace, and if it should be necessary to provide supplies, there might again be profit in army contracts. Philadelphia was really never so prosperous as during the war, and our manufacturers might find compensation for the sacrifices they have lately been obliged to make to carry the elections in furnishing supplies at reasonable profits to the new regiments which will probably be required. More important than all, though, is the arrest of the industrial development of the South.

It is all very well to rejoice in the prosperity and growth of the new Northwest, for there sound views upon the tariff generally prevail, and their progress does not

now interfere with ourselves; but the advance of the South is to a great extent at our expense. Her cotton mills compete with those of the New England and Middle States, and her furnaces are supplying pig iron at rates which make it impossible to run those of Pennsylvania. If the Democrats had never been allowed to regain control of the State governments of the South, Northern capital would never have embarked in the development of Southern coal and iron; and the surest and speediest way to put a stop to this competition from men who are our political enemies, as well as our commercial rivals, is to carry through and enforce measures like the Lodge Election Law. They won't like it, and some of them will be fools enough to make trouble about it; and if we can once more get them into the condition they were before 1876 we won't hear any more about cheap iron and cheap cotton goods from the South. They will have other things to think of.

It might be that Speaker Reed has been building better than he knew, but a man as astute as Senator Quay has doubtless appreciated all the advantages of the proposed law and he is quite right in postponing the McKi-ley bill for this, for what tariff could afford such ample protection to Pennsylvania manufacturers as to shut out the products of the cheap negro labor of the South?

Philadelphia, June 30.

ANOTHER advance in the wages of miners is cabled from England. The total increase of wages within less than two years has been thirty per cent. While miners on the other side do not receive the average per diem or per ton paid in the United States, still this large percentage of increase over there is a confirmation of the MANUFACTURERS' RECORD's statement, made several years since, that while the cost of producing British iron would steadily increase, the cost of producing it in the South would be steadily reduced, not through a lessening of wages, but by the application of economic methods in handling the raw materials and by improvements in furnaces. Both these causes of reduction are being steadily worked out by ingenious and practical men, and it is but a question of time as to when Southern iron furnaces will reach the extreme limits of economic production. Meanwhile, the cost of making iron in Great Britain must, from the very conditions there, be upward instead of downward, and the final result will be that the South will take the lead of the world in making iron and steel.

THE Iron Car Co., which failed six weeks ago, is to be reorganized, and creditors are to be paid in full. A syndicate, composed of Brown Bros. & Co., Post, Martin & Co. and other bankers, will, it is said, put \$600,000 capital in the new company.

A REAL estate transaction of stupendous proportions has been consummated by Texas parties. It is the sale of 6,000,000 acres of land in the State of Tamasopo, Mexico, together with about 100,000 head of cattle. The purchasers are an English and Dutch syndicate lately formed in Europe by John Hancock, of Austin. The syndicate purposes to colonize the land and also erect on it refrigerators for beef exporting purposes. The price paid was 50 cents an acre for the land and \$10 a head for the cattle.



## GENERAL NOTES.

A BIG land deal has been made at Aransas Pass, Texas. Captain Elgin has bought Black Jack Peninsula, 65,000 acres, at \$250,000. This is fine bay front and agricultural land. It is understood Captain Elgin is backed by a syndicate of wealthy horticulturists, and will devote it to grapes and other fruits. Surveys have been begun from the pass along St. Joseph's Island to Black Jack Peninsular.

THE Georgia State geological department is well under way in organizing and ready for work. The act providing for the survey says that it must commence simultaneously in each of the three sections presided over respectively by the geologist and his two assistants, and \$1,000, or as much as may be necessary, shall be applied to each of these sections for an outfit and necessary expenses incident to the prosecution of the work. Such a survey is no small matter, and in order to get over the ground the surveying parties must be well equipped with horses, wagons, tents and other things going to make up a camping outfit, as well as with scientific apparatus. Field work will be begun as soon as possible.

THE New Orleans Cotton Exchange has issued the June statement, embracing the 43 weeks of the season from September 1 to June 27 inclusive, showing that 7,122,081 bales of the crop of 1889-90 have come into sight, including takings by the Southern mills. Up to this time last season the amount brought into sight was 6,838,673 bales, or 98.56 per cent. of the entire crop. It indicates that of the supply this season 2,248,210 have been taken by American and Canadian mills, including 455,015 south of the Potomac, and 4,786,459 bales have been exported to foreign parts. Up to this time last year American mills North and South had taken 2,214,457 bales, and the foreign exports were 4,599,837. It also shows that the Northern takings and Canada overland are 33,753 bales ahead of the corresponding 43 weeks of last year, and that the excess in foreign exports for the season is 186,622. During the last week in June stocks at the American ports and 29 leading Southern interior markets decreased 17,548 bales, against a decrease last year of 21,097, and are now 68,251 bales less than they were at this time last year. In consequence of the smallness of the movement weekly crop figures will be discontinued until the opening of the new season.

THE highest flight in the line of capitalization in the South, if not in the country, has been attained by the Anglo-American Real Estate & Improvement Co., Limited, of New Orleans, which places its capital stock at \$400,000,000, to be represented by 4,000,000 shares, each of a par value of \$100, and to be subscribed for at par. The company is authorized to buy and sell land, and do a general real estate and building business, establish industries, build up communities, and do a general developing and promoting business.

A NEW land company called the London & New York Land Co. has been organized at Jellico, Tenn. This company have about 2,000 acres of land in and adjacent to Jellico. On this property are three fine coal mines fully equipped and in operation. The balance of the land is a fine town-site lying between the Pine and Jellico mountains. Jellico is a very live, promising town of some 2,500 people. It already has two railroads, and surveys have been made and rights-of-way secured for two or three more. The coal output of the various mines at Jellico is from 200 to 250 car-loads a day, and analyses have proved this coal to be the equal of any in the country, so it is claimed. The surrounding country is

rich in virgin timber lands and inexhaustible deposits of iron. These natural resources, together with the railroad facilities and energetic management, give the London & New York Co. encouragement for great industrial growth. They have already secured some industries, and are offering favorable inducements for others.

CARDIFF needs more houses, says the Herald. Every residence is occupied as soon as completed, and still the crowd of impatient house-seekers increases. There is an army of mechanics here, the best class of population, who will bring their families and locate as soon as they can secure houses.

IT is desired to make the Guadalupe river more navigable, and citizens of Victoria, Texas, have organized for the purpose of removing the greatest obstruction, "the raft." The work will probably be accomplished by cutting a new channel for the river around the raft.

AT the annual meeting of the stockholders of the Americus (Ga.) Investment Co. last week, a dividend of one hundred per cent. was declared upon its capital stock of \$500,000. The net earnings of the company for the past year was more than \$600,000, nearly all of which will be paid in dividends. The capital stock of the company is shortly to be increased to \$1,000,000.

AMONG the items in the agricultural appropriation bill is an appropriation of \$2,500, to be used to investigate the natural history of and remedies for destroying the cotton-boll worm.

A MOVEMENT is on foot in Florida to cultivate Japanese bamboo, not only for its attractiveness, but for its utility.

The real estate transfers made in Dallas, Texas, during June aggregated \$2,192,000, against \$1,798,000 for the corresponding month last year.

THE Southern Pavement Works at Fort Payne, Ala., have begun work. This is said to be the only establishment south of Baltimore that manufactures asphalt paving.

THE Valley Land & Improvement Co. at Luray, Va., announce that they have sold all of their stock—\$1,000,000 worth—and are now negotiating for a number of industries.

SEVERAL places in the South have been threatened with an ice famine, in some cases owing to breaking down of machinery, but in most cases, as reported, to a short supply of ammonia, owing to the operations of the Ammonia Trust. In consequence of this it is seriously proposed at Atlanta to manufacture ammonia to supply Southern ice factories.

NEW ORLEANS has a prospect of a system of drainage, as a bill to that effect has just passed the legislature. The bill provides for a commission to supervise the work.

ONE sure evidence of the prosperity of Alabama is the growth of her railroads and the increased valuation of railroad property. In ten years this increase in Alabama has been \$40,000,000. The figures in round numbers are: Valuation of railroad property for 1889, \$48,000,000; in 1879, \$8,000,000. Just now the roads are devoting themselves to taking up outstanding mortgages and paying indebtedness. The East Tennessee, Virginia & Georgia and the Richmond & Danville companies have issued \$6,000,000 fifty-year 5 per cent. gold bonds on the Cincinnati Extension. These bonds are guaranteed by the Richmond & West Point Terminal. The Louisville & Nashville Co. has filed a unified

fifty-year 4 per cent. gold mortgage for the purpose of retiring mortgages and indebtedness. The mortgage amounts to \$41,917,660. The Evansville & Terre Haute directors are discussing a proposed issue of \$3,000,000 of stock to represent monies spent in improvements and betterments.

THE report of the committee appointed to assess the valuation of property at Roanoke, Va., has been formally made and shows a valuation of \$6,750,884 against \$1,481,632 in 1885. Five years ago Roanoke was tenth in point of valuation of Virginian cities. Now it claims fourth place.

THE Cherokee Land Co., recently organized with Hon. J. C. J. Williams, of Knoxville, Tenn., president, has purchased 569 acres of land on the south side of the Tennessee river, southwest of Knoxville, at prices ranging, it is said, from \$150 to \$300 per acre. The company proposes to commence the development of the property at an early date in a vigorous and extensive manner, expending \$300,000 in improvements which include the laying off of a new town, grading and macadamizing streets, constructing sewerage system and water works. It has reserved 200 acres for a park, in the center of which is to be a large lake supplied from chalybeate springs on the property. A bridge will be built across the river and an electric railroad constructed to Knoxville.

A PROMISING new town in East Tennessee is Watauga City, the point selected for extensive operations by the East Tennessee Mining & Improvement Co. This company, with a capital of \$1,000,000, has selected this point for the development of their extensive steel and lumber interests. They have under construction a line of four miles of railroad up the valley of the Watauga to connect their town-site with the E. T. & W. N. C. Railroad, and will continue the line a short distance across the E. T., V. & G. tracks to a connection with the C., C. & C., thus not only placing the manufacturing interests at Watauga in direct connection with these two great systems, but also bring the purely Bessemer ores of the Cranberry district 30 miles over favorable grades to Watauga, which is also close to the fuel at the Big Stone Gap or Pocahontas fields. The deposits of magnetic Bessemer ore are extensive and of undoubted quality, being low in phosphorus. Watauga City is on the main line of the E. T., V. & G. Railway, which at this point crosses the Watauga river, a beautiful stream from the granite ridges of the North Carolina and Tennessee mountains. The immediate surrounding country is rich limestone farm land, undulating, and furnishes all the natural advantages of drainage, abundant water supply and most favored climate, essential to successful town development. John W. Hoffman, of Philadelphia, is president of the new company.

THE shipments of melons from Savannah during June were immense, both to the North and West. The Northern shipments were: To New York, 210,536 melons; to Boston, 90,000; to Philadelphia, 4,000. Shipments to New York began June 9; to Boston on the 12th. Last year shipments up to July 1 were: To New York, 78,933; to Boston, 55,679; to Philadelphia, 4,000. This makes an increase in shipments of 165,924 melons, or 120 per cent. more than in June, 1889.

THE discovery of manganese at Tredgar has renovated the growth of that most prosperous town, says the Birmingham (Ala.) News. Manganese will be in great demand in future years in Birmingham.

A NUMBER of colored men in Birmingham propose to organize a bank with

\$50,000 capital, and not only is all the money to be supplied by colored men, but the bank officials are to be colored men. The desire of the promoters of the bank is to have it well patronized and supported by colored people.

AMONG the towns of promise in North Carolina is Marion. The recently organized Old North State Land Co. is doing good work. In addition to four miles of street railway, which the company propose to build, they have in hand a hotel, which is to be built on a lofty and commanding site, and have a capacity of accommodating 250 people. This company is also developing the iron deposits in the vicinity and in other ways building up this town. The "three Cs" road will be in full operation to this point in a few days, and the land company have arranged for a grand auction sale of lots on August 27, 28, 29 and 30.

F. A. SWINDEN, of Brownwood, Texas, enjoys the distinction of owning probably the largest pecan orchard in the world. It contains 11,000 trees, and covers 400 acres. There is no surer way, says he, to make a fortune than to plant a pecan orchard. A tree eight years old will produce a bushel of nuts, and these are worth from \$2 to \$4 per bushel, and when the tree is 12 to 15 years old, it will bear about 14 bushels of nuts. In the meantime, while waiting for the trees to mature, the land is planted part with cotton and part with alfalfa.

DUBLIN, TEXAS, is growing rapidly. During the past two months these industries and improvements have been secured: Cotton compress and manufacturing company, fire department, street cars, electric lights, ice factory, water works, canning and manufacturing company, broom factory, marbleized tile and stone factory, and several minor improvements.

BIG STONE GAP, VA., promises to be a considerable railroad center, as five railroads are endeavoring to reach it and three others are projected. The first train on the South Atlantic & Ohio arrived in May, connecting Big Stone Gap with Bristol, Va. The Louisville & Nashville has nearly completed the grading of its track, and will have its trains running in September. The Norfolk & Western has reached a point 35 miles distant, and is expected within a year. There is a short line projected from Rogersville, 40 miles distant, and the grading of the Charleston, Cincinnati & Chicago Railroad is finished to within a few miles of the "Gap." The Baltimore & Ohio connection and the Chattahoochee Road are expected within two years. The railroads foresee great development there. The Virginia Coal & Iron Co. has purchased 100,000 acres in the immediate vicinity, and a contract has been closed for an immense coking plant. Two large furnaces will be erected by the Appalachian Steel & Iron Co. as soon as transportation facilities permit, and other enterprises are projected. Throughout the whole adjoining country are indications of great development. A leading Scotch iron manufacturer who has recently visited the Gap estimates that pig iron can be made there for \$7.50 per ton.

A LAND sale was held at Kensington, Ga., last week, and a large number of lots were sold.

THE Texas State geological department has secured the co-operation of the United States coast survey in the topographical survey of the Travis-Pecos region of Texas. An important point is thus gained, the United States survey being well equipped with fine instruments. They will lay the basis of the future triangulation by the State geological survey.



## GRAHAM, VA.

**New Companies Organized—Work on Streets and Buildings Proceeding Rapidly—The Purchase of the Scioto Valley & New England Railroad by the Norfolk & Western Will Prove a Potent Factor in the Growth and Development of Graham, Va.**

[Special Cor. MANUFACTURERS' RECORD.]

PIEDMONT HOUSE,  
GRAHAM, VA., July 7, 1890.

Graham, Va., inaugurated development upon a broad and liberal basis. The opening chapter revealed a wise, conservative and advanced policy. Every movement was prudent and judicious. Men of experience controlled the enterprise, and Graham has never been classed in the experimental column, even by rival enterprises. Previous to the organization of the Graham Land & Improvement Co. the location for the town was carefully considered and then the deal was consummated. Every advantage, and the few disadvantages, of the favored section were discussed, and after a survey of the field, it was conceded that Graham offered inducements for the building of a city superior to any point within a radius of many miles. In my letters to the MANUFACTURERS' RECORD from this place I have always given facts as they existed, as ascertained by a personal examination. I have never attempted to color the surroundings, and do not propose at this time to deviate from the rule. I entertained the belief from the first day that I came here that it was destined to lead the way in material development, and advanced no prediction that has not been fully and completely verified by subsequent events. My views were based upon the location, proximity to coal fields, railroad advantages, and the character of men who are interested in the future of Graham. Those who have carefully noted what has been accomplished will observe that I have kept strictly within bounds. This course meets the approval of the company, as they do not desire to deceive or in any way mislead the public. The company has believed in stating the truth, regardless of consequences. This is commendable, and pays. Honest, straightforward dealing is the motto of the company, and under no circumstances will the directors sanction any misrepresentations. As a result, the company possesses the confidence of investors and stockholders, because it proposes to conduct the work on a high plane. Can such a movement prove a failure? It never has. This is the reason then why it can be truthfully claimed that Graham is leading the way.

Since my last visit to this industrial center, a great deal of money has been expended on the streets and in buildings. Work on the new hotel, Graham Inn, is being pushed, and when completed it will prove a valuable acquisition, as one serious trouble in Southwest Virginia is the lack of hotel accommodations for the masses that are flocking daily to this section, it being next to impossible to secure rooms unless one telegraphs ahead. This new building, when completed, will cost \$50,000, and is expected to be ready for occupancy September 1. As a further guarantee, the land company have contracted for the construction of two cottages of modern architecture, to cost \$4,000 each, within a short distance of the hotel. An Episcopal church of stone, to cost \$10,000, will be built, not on paper, but as a certainty. The site for a rolling mill has been granted, and the plant will be established near the furnace.

The flouring mill is nearing completion. It is being built by Mr. T. B. Graham, and will have a daily capacity of 125 barrels. As a further indication of the solid faith reposed in Graham the officers of the Vir-

ginia Real Estate & Investment Co., a company already holding \$50,000 worth of lots, invested \$10,000 additional, and instructed their agent, Mr. R. K. Wright, Jr., to immediately commence the construction of 25 houses. In this connection it will be eminently proper to state that the Graham Building Co. holds about \$45,000 worth of property and has decided to branch out and materially assist in the further development of the place.

For the purpose of more fully convincing the general public that every promise made will be carried out to the letter, I would state that the Norfolk & Western Railroad has commenced work on the new union depot. As that company never engages in a work to do it by half, it is safe to say that the building will be a credit to the road and an ornament to Graham. Its approximate cost will be about \$15,000. It will be of stone and a model of the kind.

By the 15th of this month it is expected that the new ice factory will be in operation. In the meantime the company has at a very heavy expense provided this luxury by having an ample supply shipped from Maine.

The Graham Furnace Co. has just closed contracts for thirty dwellings to be erected at once.

The furniture factory company has increased the capital stock from \$50,000 to \$100,000, and commenced work on the factory. In this enterprise Mr. Everett Gray, the well-known capitalist, of London, England, is largely interested, and has very recently visited Graham.

The march of improvement is visible on every side. Ever since the day of sale the company has continued the work on the streets, and the monthly pay-roll now aggregates close to \$6,000.

Adjoining Graham is the town of Bluefield. The day is not far distant when it will be under the municipal jurisdiction of Graham, and in this way have the benefit of water, electric lights and other city advantages.

A word relative to the water supply. A number of springs of pure mountain water are close at hand and will be utilized for the benefit of the city, and there will be an unlimited supply for all purposes.

In conversation with the real estate agents, I was informed that lots are daily advancing in price. Lots that commanded \$600 a few weeks ago are now listed at \$1,000. This is strongly indicative of the confidence people have in the place.

The purchase of the Scioto Valley & New England Road by the Norfolk & Western will prove an important factor in the future growth of Graham. It will furnish a direct outlet to the West, and provide connections with the other leading trunk lines of the country. Then, again, Graham is only nine miles from the famous Pocahontas coal fields, from which point over 2,000,000 tons of coal will be shipped this year. Another advantage which Graham has is the junction of the Clinch Valley Extension, now being constructed to connect with the Three Cs Railroad.

Over the different lines 90 trains daily pass the town. I do not hesitate to say that Graham will march forward on a sound, solid basis, and that it presents an excellent field for the investor or the mechanic. The future is bright, and now is the best time to take advantage of the golden opportunities presented.

CHAS. E. HERBERT.

SUBSTANTIAL evidence of the prosperity of Birmingham is marked by the large amount of building now in progress there. A calculation shows that the buildings, mostly business blocks, now being erected in the city would cover about four and a-half blocks. The value of these buildings is \$561,500. The new buildings are of a substantial character, mostly from three to five stories.

## "The Handsomest Place."

[Special Cor. MANUFACTURERS' RECORD.]

BASIC CITY, VA., July 4, 1890.

Mr. M. E. Ingalls, in a letter published in yesterday's issue of that excellent paper, the Valley Virginian, referring to the site of Waynesboro and Basic City, says: "It is the handsomest place I have ever seen for a city." Everybody knows who M. E. Ingalls is, and that he is a man who always means just what he says. There is another opinion expressed in the same letter by Mr. Ingalls which, "between the lines," means enormous activity, taken in connection with the organization at Boston of a company to bring Kanawha coal and Blue Ridge iron together at this point. "As to the value of the coal properties in the Kanawha district," Mr. Ingalls goes on to say, "there can be no question that they are the greatest properties yet undeveloped in this country; for I do not consider the developments there to date have been anything more than the scratching of the surface."

From what I can gather, it is the intention of the Chesapeake & Ohio management to lend its mighty co-operation to the scheme to bring the two greatest levers of industrial success together at this favored location. If this view be correct, the consequence will be a city whose growth will break all Western records and give the world greater cause for wonder ten years from now (when the census of the closing decade of the century shall be taken) than the growth of Kansas City, Omaha or Denver has given in previous decades. One of the troubles with Virginia towns until recently has been either the apathy or the poverty of her railroad companies. It was the Norfolk & Western that took the initiative in developing such resources as were calculated to increase its traffic, a policy of which I believe Major Jed Hotchkiss was the author, and of which Col. Chas. G. Eddy has been the able executive. And now since the other great mineral road of Virginia has passed into the hands of the Ingalls administration, I am looking for a new kind of railroad war, which will differ from all preceding railroad wars in that it will do good instead of harm—good to the stockholders of the N. & W. and of the C. & O. Companies, and good to the State of Virginia, and good to the thousands of people whom it will induce to better their condition by coming to live in a land which the Creator has amazingly favored.

This "handsomest place for a city" upon which President Ingalls has ever laid eye will, in the nature of things, be a strategic point in this coming contest between the great coal carriers—this contest for leadership in the work of converting raw materials into merchantable commodities—that is to say, the work of creating traffic instead of waiting for traffic "to turn up," which used to be the policy of the Mcawbers at the head of most Southern roads.

In the letter above referred to, Mr. Ingalls speaks of "signs of improvement" which he observed hereabout. The new industries already organized at Basic City, and now in course of construction, are of sufficient variety and importance to require several pages of space for even the most matter-of-fact description. They deserve at the hands of the MANUFACTURERS' RECORD a chapter unto themselves. A single one of these industries—a hardware factory—will employ 500 hands, mostly well-paid and skilled workmen. Another will employ 250 men making cars. Still another will have a pay-roll of about 100 people making paper. The 100-ton furnace will employ, including miners, more than 300 men. All these establishments are backed by ample capital, not only for the buildings and equipments, but for carrying on business after they begin work. The plants

are not merely projected, but are being built as fast as the materials can be handled. So, too, is the new hotel, a picture of which accompanied my last letter from this place. A big ice factory is almost completed. A company with \$50,000 capital was organized last Monday to build and operate a match factory. The "belt line" along the river front, connecting the Chesapeake & Ohio with Shenandoah Valley Railroad (remember the S. V. is about to become a part of the Norfolk & Western), is being rapidly pushed to completion. A model weekly newspaper, the Advance, now being published at Basic City, tells the progress of each week, and live investors all over the country ought to take it. I know of no two papers in new towns more in harmony with my notion of what such papers should be than this one and the Fort Payne Herald.

So much for the Basic City side of this, "the handsomest place." Now a word about the Waynesboro side of the silvery river whose translucent pools mirror for miles the stately Blue Ridge mountains—a river which is not alone a thing of beauty, but a creator of power, as the mills of Waynesboro prove. The Waynesboro Company is making hay while the sun shines, grading its new streets, building a superb hotel, securing industries and generally getting things into shape for the inevitable autumn activity. Two magnificent drives are being laid out, one just along the west side of the river, the other along Wayne avenue, across the river on a broad new iron bridge, past the Amazon spring, and through the property of that company to connect with the southern end of Basic City. The new hotel is "a dream of beauty" from an architectural point of view, and when completed will offer to its guests a view more beautiful than any yet created by the dream or vision of one in a million of us mediocre mortals.

I am such a lover of good hotels, especially of hotels with commanding views of charming landscapes, that I must, for a moment, indulge in a digression. Few of the new towns in the South remain oblivious to the importance of providing comforts for possible investors; and so a good hotel is getting to be one of the first things decided upon when a new town is started; but alas for some of those recently finished and now under way! A blacksmith might have been the architect. The result is a harsh and painful grating on the senses; a suggestion of a man in a dress suit with brogan shoes and a dirty shirt. This Waynesboro hotel was designed by an artist in his business, Mr. Albert E. Varnall, the gifted young Philadelphia architect, who is getting to be all the fashion, as he justly deserves. I met him some time ago at the Luray Inn, and he showed me conceptions which indicated almost a revolution in the art of hotel building. A day or two ago I saw a drawing of one of these conceptions which is about to have its materialization at Elkton, Dr. Miller's new town.

The new Waynesboro hotel is to occupy the site of the old Galleher homestead, and will be surrounded by shade trees that were probably planted during the decrepitude of the 19th century. The design is unique and pleasing, particularly adapted to the site and environment, abounding in cosy and comfortable interior features, with airy rooms and inside piazzas, the *tout ensemble* forming a place redolent of hospitality. It will be a monument to the genius of Mr. Varnall, whose studio at 14 S. Broad street, Philadelphia, is a paradise for those who can appreciate the beautiful in architectural art.

Waynesboro has in operation the Rife & Scoppord Iron Works, two furniture facto-



ries, a large sash and door factory and a big flouring mill, and several prosperous minor industries. A New England wool manufacturer recently made a proposal to the Waynesboro Company for the location here of a woolen mill to run ten sets of cards and employ more than 200 operatives. His proposal has been accepted by the company. A number of fine brick stores are under contract on Wayne avenue, while handsome dwellings are going up on nearly all the new streets. Waynesboro is a delightful place of residence in every respect, but the existence here of two such excellent institutions as Fishburne's Military School and the Valley Female Seminary add enormously to its natural attractions as a home-town. The Amazon Springs at Waynesboro are destined to be counted among the wonders of Virginia, both on account of the remedial properties of the water and the immensity of the flow, while a lithia spring, scarcely less remarkable, is among the attractions of Basic City.

THOMAS P. GRASY.

### Dallas As a Money Center.

[Special Cor. MANUFACTURERS' RECORD.]

DALLAS, TEXAS, July 2, 1890

Dallas being an extensive distributing and manufacturing point, it necessarily follows that her financial interests are proportionately great. Her citizens are accumulating wealth, and foreign capital seeks investment in her lands, stocks and bonds, all combining to increase the volume of money. In August, 1887, there were in Dallas 4 national banks, representing \$1,170,000 authorized capital and deposits of \$2,055,000. In 1890 we find 8 national banks with over \$3,000,000 capital and surplus and \$6,125,000 deposits. This shows something of the remarkable growth of the city and conveys an idea of its importance as a banking and financial center.

The banking facilities of this city at present include 8 national banks and 4 private banks. The City National was established as a State bank in 1873, nationalized in 1880 and consolidated with the Dallas National Bank in 1886; present capital \$325,000; surplus \$125,000; deposits \$1,600,000. July 1st the City National declared its regular semi-annual dividend of 6 per cent. and purchased its present site, one of the best business corners in the city, for \$70,000. The American National Bank has a capital of \$200,000, surplus \$100,000; National Exchange Bank, capital \$500,000, surplus \$40,000; organized in 1887; declared a semi-annual dividend of 6 per cent. regularly since organization; Fourth National Bank, capital \$600,000, increased from \$200,000 last January; surplus \$20,000; Bankers' & Merchants' National Bank commenced business January 1890, \$500,000 capital; Central National Bank, capital \$250,000, established this year; North Texas National Bank, capital \$500,000; National Bank of Commerce, organized in March, 1889, capital \$150,000. All these banks declare semi-annual dividends of 4 to 6 per cent. Several of them own fine property, the North Texas National having one of the finest office buildings in the State. The stock of these banks, where any is for sale, is rated all the way from \$105 to \$170. The banks report daily to the Dallas clearing-house, which is regularly organized and fitted out with magnificent quarters and furniture, the latter being of Dallas manufacture. The total bank clearings in 1887 were \$13,161,000; in 1888, \$43,967,000; in 1889, \$57,828,000. The following statement of clearings furnishes further evidence of the continual growth of the banking business in Dallas:

Month.	1889.	1890.
January	\$6,936,697.26	\$11,531,028.56
February	4,336,179.90	8,983,660.14
March	5,601,368.54	10,630,804.14
April	5,611,120.02	10,230,192.44
May	5,318,548.98	11,225,232.12
June	7,359,372.18	

This is a larger relative increase than is shown by any other city in the United States.

In addition to these banks, five home and over twenty European and American investment companies make Dallas headquarters for their branches, which loan on farm, ranch and city properties over \$10,000,000 annually. There are also eight local building societies and four strong national associations with an authorized capital of \$500,000,000. The prevailing rate of interest here is 10 per cent., and the majority of loans are made on the basis of 60 per cent. valuation.

Dallas securities are always in demand at good, round premiums. To-day the city sold \$350,000 30-year gold bearing 5 per cent. water works and sewer bonds to a Chicago firm for 1 1-5 per cent. premium.

The rapid growth of the city in population and productive industries and the development of the magnificent farming section of this portion of the State insure a paying interest on all investments in the stocks and bonds of Dallas institutions. As an investment the Dallas Manufacturers' Aid & Improvement Co.'s stock is attracting attention. However, this stock is offered at a premium, and the work being done by the company in developing its property guarantees a handsome dividend in the future. This company is doing a class of work that is permanent and enduring. Their plan of giving away sites to desirable manufacturing enterprises is accomplishing as much as anything else towards building up these industries in Dallas, and every factory located increases the value of the stockholder's investment.

Shrewd financiers are not slow to observe the desirability of investments in Dallas, which is growing and expanding in every branch of industry, and outside capital is coming in very rapidly.

ANOTHER large company has been incorporated the Compania Metalurgica Mexicana. Its objects are to have places of business in the North, Mexico and Texas, and its object to smelt and refine silver and other metals, mine ores and other minerals, transport and store coal and water and deal in and hold real estate. The capital is fixed at \$4,000,000.

A FEW months ago a syndicate, composed of Col. Frank Coke, Gen. P. M. B. Young and others, purchased the Okefenokee swamp from the States of Georgia and Florida, in which the swamp lies. The swamp covers an area of some 1,500,000 acres, and cost the syndicate 26 cents an acre. It is now reported that the whole tract has been sold to an English syndicate at \$1 an acre, giving the original purchasers a profit of over \$1,000,000.

In a recent interview Mr. Pat Calhoun said: "Never in the history of Southern progress have the railroads had a better outlook than at present. All the roads south of the Ohio river are in a better financial condition, and are transacting more business than since their inception. From all the terminal stations a great amount of tonnage is reported, and it necessarily follows that a greater amount of profit accrues to the road. Every road that I have any interest in or knowledge of is in a very healthy condition. Most of the roads are making considerable improvements along the route, which adds considerably to the stability and value of the respective roads. Just at present there is but very little interest in Southern railroads beyond the fact of their material advancement, and the consequent advancement of the territory through which they pass. The most gratifying feature of the progress of railroads is the prosperity of Southern States. It is always a sure sign of commercial growth when the railroads are in good shape; they go hand in hand, and are dependent upon each other."

## IVANHOE, VA.

### Its Situation, Mineral Wealth and Other Causes Assuring its Advancement.

[Special Cor. MANUFACTURERS' RECORD.]

IVANHOE, WYTHE CO., VA., July 8, 1890.

The projectors of Ivanhoe, Va., propose to make it a city. Upon what grounds is this assertion based? Directly and principally upon its location, mineral wealth and railroad advantages, valuable combinations fully sufficient to insure success. Nothing more is essential; therefore Ivanhoe enters the field fully equipped to maintain its position in the contest for mineral and industrial supremacy.

Ivanhoe is at the junction of the Cripple Creek and North Carolina extensions of the Norfolk & Western Railroad, at the base of the Alleghany mountains, where the New river breaks through on its way North. It is directly in the center of the great iron ore district of Virginia. With the completion of the North Carolina extension of the Norfolk & Western (which will be accomplished within the next six months) and the completion of the Cripple Creek road to Speedwell, Ivanhoe will be one of the most important railroad centers in Southwest Virginia, and the first industrial and manufacturing town north of the Alleghany mountains, and directly upon the new through line connecting the Carolinas with Virginia, West Virginia, Kentucky and the Northern and Western States.

By reason of its excellent railroad facilities, Ivanhoe is within minimum haul of the enormous deposits of Gossan iron ore of Carroll county and the limonite and mountain ores of Cripple Creek valley, and also within easy haul of the celebrated Pocahontas and Flat Top coal and coke fields. At this time immense limestone quarries are being operated within the town, and already in successful operation is the No. 1 furnace of the New River Mineral Co., while the Ivanhoe Iron Co., under the presidency of Mr. Jordan L. Mott, of the Mott Haven Iron Works, of New York, has been organized for the purpose of erecting another furnace of large capacity. The Ivanhoe Zinc Co., with a capital of \$500,000, has purchased large deposits of exceedingly rich zinc ores, which they are now developing, and they propose to erect several zinc furnaces. Moreover, Ivanhoe has an abundance of timber, such as red and white oak, chestnut, hickory, pine and hemlock, which give exceptional opportunities for wood-working establishments and steam tanneries. In the very center of a wool-raising district, and also close to the Southern cotton fields, no place presents more favorable advantages for woolen and cotton mills than Ivanhoe, Va.

The Ivanhoe Land & Improvement Co. purchased about 1,000 acres of land at an average price of about \$130 per acre. This property is advantageously located for business, residence and manufacturing sites. With a capital of \$300,000, there remains \$170,000 (after paying for the land) which will be used in laying out and grading streets, putting in a system of water works, building houses and assisting manufacturing enterprises to locate at this point. It is the intention of the company to make the town attractive and the improvements permanent in order to induce parties seeking locations for manufactures to make it their home, and when factories are established, to have the necessary houses ready for working men and their families to live in. It is claimed by conservative experts that coke pig iron can be manufactured here cheaper than at any other point in Virginia, because the ore supply of various qualities is within short haul of the furnaces located at this point.

The town is admirably situated. The elevation above the level of the sea is 1,965 feet. The climate is delightfully cool in summer and not extreme in winter. The scenery is picturesque and the eye never tires in beholding the work of nature.

A level tract of land with a front of 1 1/2 miles has been reserved for manufacturing purposes. The company proposes to erect at once a hotel to cost \$35,000 to construct water works, a planing mill, and a brick factory in a short time. The Norfolk & Western Railroad will erect a handsome depot building, and other valuable improvements are projected. The stock of the company is already commanding a premium of \$5 on each share, but it is not on the market at any price. The officers of the company need no endorsement. Their names are sufficient to inspire confidence. All of them occupy prominent positions in the financial and industrial world, and command the respect of the public. This has been one of the strongest instrumentalities in placing Ivanhoe in the front. With such men in command as W. C. Van Doran, Jordan L. Mott, Col. Chas. G. Eddy, Edwin Einstein, Geo. H. Seely, Gen. Joseph A. Walker, Herbert G. Hull and Geo. M. Seeley, the public can rest fully satisfied that success is plainly and unmistakably assured to the enterprise.

As an inducement, the company will offer at private sale, commencing July 16, desirable business and dwelling lots at an average price of \$275. These lots are all favorably located, overlooking the beautiful valley of New river. The extremely low price of lots insures quick and large returns to investors. They will be sold, one-third cash, balance in one and two years.

If a man is waiting for a more profitable time to invest, or for a place that offers greater advantage, he needs the eye of a prophet to direct him. This is the golden chance, for fortune comes but once, according to the old adage, and here it is for some one, and without assuming any risk whatever.

CHAS. E. HERRERT.

AT Villa City, Fla., it has been found that conspicuous banks of peculiar white clay along the river side contain fine quality of kaolin and quartz sand. The bed of this clay is estimated to cover 160 acres and to be 12 feet thick. By washing this clay it is claimed that the finest grade of kaolin is secured, and the sand remaining is almost pure quartz. Experts from the North are now examining this property, and if the kaolin and quartz prove to be what is claimed for them, a strong company will be organized to develop the property.

A YOUNG farmer of Edgecombe county, North Carolina, has added a valuable item of information to the process of tobacco culture. He found that turkeys would destroy tobacco worms, and drove a flock through his tobacco field every day. The turkeys soon "caught on," and he says that they are now so trained that they make for the field every morning as soon as they are turned out. The dodge is so successful that an inspection of the plants by human labor once in two weeks is all that is necessary.

THE Macon Sash, Door & Lumber Co., Macon, Ga., desires to correspond with manufacturers of cement, lime, paint, putty, nails, pulleys, sash-weights, etc.

THE Shocco Springs Co., Henderson, N. C., wants the address of manufacturers of glass bottles.

**If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year, or six months for \$2.00.**



## TREDEGAR'S BIG DEAL.

Work to Commence at Once on the Furnace, Steel Mill and Rolling Mill.

Ground to Be Broken This Week for Brick Works, Oil Mill and Fertilizer Factory.

The Republican, of Tredegar, Ala., or Jacksonville, as the postoffice authorities still call the town, in its last issue gives the following facts about the great steel and other enterprises to be built there:

"It has been known for some time that the officers of the Jacksonville Mining & Manufacturing Co. have been in negotiation with a certain large Eastern and foreign interest to secure the establishment of a steel plant at Tredegar. Negotiations were indeed well advanced several weeks ago, but were seriously jeopardized by the premature announcements made in several Southern papers, whose Tredegar correspondents telegraphed exaggerated rumors concerning the matter. The negotiations were not closed in fact until Thursday of last week, and then, of course, subject to the satisfaction of the steel company's engineer with the site, facilities, transportation arrangements, water supply, etc.

The steel movement, involving collateral projects and improvements of the greatest importance, has been watched and carefully noted by the Republican, and the officers of the company have courteously kept us advised of every step. We have refrained from giving publicity to these matters until now, in order not to embarrass the extensive and delicate negotiations which have been in progress. At this date the entire movement has advanced so far beyond the danger line that reticence is no longer necessary. It may be said, therefore, that the steel company has unofficially notified President Burke that their chief engineer would be at Tredegar within ten days or two weeks to lay out the plant, plan the water improvements, select clay from which to make the 17,500,000 bricks which the plant will consume, and start the work in general.

It has been not generally known that the most obstructive feature in the effort to secure this great plant has been the question of obtaining a satisfactory and adequate supply of pure water so situated as to be at once convenient to sites for the various departments of the plant, to railway transportation and to the division of the city of Tredegar which is to form the residence of the steel workers who, with their families, will constitute a community of about 12,000 souls. The only portion of Tredegar offering these conditions approximately, is included within the area east of the East Tennessee, Virginia & Georgia Railway, southwest of Cherry Hill and south of the business part of the city—Park avenue, the railway station, etc.

People who have gone over the country hereabouts in a scientific way, are quite aware that the geological formations in the area indicated are badly faulted, and especially so in the direction of the old town. It is true that the village spring feeds a considerable branch which runs through the territory, and has been locally regarded as offering a large supply of water for industrial purposes. The experts of the steel company, who have made several visits here for the purpose of solving this question, have not been satisfied that this spring branch would entirely serve all their purposes. Even if it should prove ample for manufacturing purposes, it could not be guaranteed free from contamination as the present town should grow to the proportions of a large industrial town. If it could be protected from contamination it would still be not available for the domestic and fire purposes, and for the sewerage of the ward of the skilled workers to

be established opposite the steel company's site beyond the East Tennessee, Virginia & Georgia Railway and south of Mr. Gaboury's residence. The matter was finally settled by two prominent gentlemen, connected with the enterprise, both experts, who were in the city last Monday. After studying the formations and the levels and other data previously taken for their guidance, it was decided that all the required conditions would be secured in but one way, which is to place the furnace, steel mill, general rolling mill, rail mill and other departments close to the East Tennessee, Virginia & Georgia track. Next, to sink one or more large artesian wells and to construct and connect with the same a considerable reservoir on the summit of the ridge west of the city, and immediately above the skilled workers' ward and the steel plant site. Following a careful consideration of all the points involved, the representatives of the steel interest decided to build such water works, it being agreed with the general manager of the mining and manufacturing company, that the works in question were to be of sufficient capacity to supply water for all purposes to the worker's district, to the several tiers of fine business property along the west side of the East Tennessee, Virginia & Georgia Railway and opposite to the steel plant, and also to the business portion of the city as far north as, or nearly, an east and west line drawn across the south end of Cedarhurst Park. Water to be in ample supply and with sufficient pressure to provide for sewerage, fire supply and all domestic purposes.

One of the chief reasons why the steel people propose this improvement, in which outside Eastern capitalists are to join them, is that they express the determination at the start to secure to their operatives an ample provision of absolutely pure wholesome water, so derived that contamination of any possible description shall be impossible. How far they may have to bore from the top of the ridge to strike the nether water courses of the Archæan system, fed as is believed from the water shed of the Great Smoky Mountains away up in Tennessee, is a matter of conjecture; but the parties interested state to us that it does not matter, as they will be quite prepared to go down 1,500 or 2,000 feet, or even more if necessary. It is needless to say that this improvement will be of the highest value and importance to every foot of property west of the railway. With the certainty of abundant public water supply, perfect sewerage and protection from fire, west side property from the south line of the steel plant site to Atkin's Grove will be as valuable for business purposes as any property in any Alabama city. It will be all needed for the accommodation of the host of merchants and tradesmen who will begin to pour in here in the autumn.

When it is considered that the work of laying out the site, creating and accumulating the material necessary to construction, and the building of houses for the operatives of the great iron and steel plant alone will employ a contingent of wage-earners equal to our present population, it is not hard to conceive that lively times for Tredegar are in store for the immediate future. The plans for all the Steel Co.'s buildings and machinery were put on the drawing boards last Saturday. Every department of the work of preparation and construction is to be pushed to the utmost, and there will be something tangible to show for it on the ground within a few weeks.

Coincidentally with the successful settlement of the iron and steel plant and rolling mill question, work on the site of the Tredegar Brick & Tile Co.'s works is to commence this week, and we are advised that the machinery for the Tredegar cotton-seed oil mill and fertilizer factory is

nearly ready and will be shipped within three or four days. As soon as the shipment has been made the buildings for the plant will be commenced.

A new era now opens for the brick, building stone, lime, lath, cement, lumber, planing mill and timber industries at Tredegar. Not less than a dozen fine brick business edifices only await a supply of brick. The company's new office building and the bank on Park avenue, and a number of stores and office buildings will start up just as soon as material can be made available. Several Eastern investors who have purchased property on Park, Wyly and Virginia avenues have indicated their intention to improve before autumn if they can secure brick and finished lumber in time. It is well known that leading local people are ready to do the same. In view of the fact that we have in and around Tredegar an inexhaustible resource of superior clays, limestone, timber and everything else necessary or desirable for the production of first-class building material of every name and kind, every member of the community should constitute a committee of one to promote the introduction of new brick-yards, the opening of limestone quarries, building of lime-kilns, establishment of lumber yards, sash, door and blind factories, furniture factories and all the rest of it. From present indications a production of 200,000 brick per day for the next two years will not supply the local demand, while there is little doubt that a production of from a-half to three-quarters of a million a day could be sold before they could be made, right along. There is a dearth of bricks everywhere. There are not many points in Alabama possessing first-rate material and facilities for brick making. We have them and can find markets for all the product we can turn out.

The Republican is advised that plans for the new Tredegar Arms Hotel will be put in hand this month, so that the work can be commenced as soon as brick, stone and other requisites are gotten together. Looking over the situation it occurs to this journal that the people of Tredegar have good cause to celebrate the Fourth of July with a vim this year. Material progress was a long time in striking us, but it appears to have come on with a rush at last.

### Literary Notes.

THE New England Magazine for July has the following table of contents: "Our National Songs," illustrated, by Mary L. D. Ferris; "Some Annals of Old Haverhill," illustrated, by Albert L. Bartlett; "A House With a History," illustrated, by E. A. Kimball; "A Woman of Shawmut," II, by Edmund Janes Carpenter; "St. Paul," illustrated, by Conde Hamlin; "A Romance of Castine," by Isabel G. Eaton; "Stories of the Fugitive Slaves," IV, Anthony Burns, by Nina Moore Tiffany; "My Lost Youth," illustrated, by Henry W. Longfellow; "Ibsen's Social Dramas," illustrated, by Edward Fuller; "An Instance," by Lucy Agnes Hayes; "Tarry at Home Travel," by Edward E. Hale, D.D.; "An Alumni Meeting," by Caro Atherton Dugan, and "Editors' Table."

THE table of contents of the Popular Science Monthly for July comprises the following articles: "New Chapters in the Warfare of Science, IX—The Antiquity of Man and Prehistoric Archaeology," by Andrew D. White; "Greenland and the Greenlanders," by Elisee Reclus, illustrated; "Evolution and the Distribution of Animals, I," by David Starr Jordan; "Concerning Corporation Law," by Prof. Amos G. Warner; "Insect Pests of the House," by Miss M. W. Brooks, illustrated; "Apparatus-Making in Education," by M. C. Wilson, illustrated; "Why So Many Definitions of Religion?" by F. N. Hale, Ph.D.;

"The Musical Sense in Animals and Men," by August Weismann; "Human Heredity," by Prof. James H. Stoller; "A Talk About Meteorites," by Oliver W. Huntington, Ph.D.; "Observations Upon Doubling of Flowers," by Byron D. Halsted, Sc. D.; "Telpherage in Practical Use," by Fredrik A. Fernald, illustrated; "The Commercial Geography of South America," by George G. Chisholm, F. R. G. S.; "Sketch of Matthew Fontaine Maury," with portrait; Correspondence—Vitiated Moral Teaching.—Where Flax is Grown and Manufactured.—A Census of Hallucinations.—The Mysterious Music of Pascagoula; Editor's Table; Literary Notices; Popular Miscellany, and Notes.

THE METALLURGY OF STEEL. By Henry M. Howe. E. & F. N. Spon, 12 Cortlandt street, New York. Price, \$10.00.

This work is a notable contribution to the literature of iron and steel metallurgy. The series of papers on the subject which have appeared as supplements to the "Engineering and Mining Journal" during the past two years have attracted wide attention and have received hearty commendation from all quarters. The volume now published presents this material in much more convenient shape, with considerable additional matter, giving the results of the most recent research, experiment and practice. Mr. Howe also presents a complete review of all important conclusions reached by earlier investigators, and his discussion of them renders the work a standard one. Every statement and citation has been carefully weighed and verified, and the references to the literature of the subject are given minutely, the book thus furnishing in itself a key to the whole range of steel metallurgy. It also furnishes the results of much new and original investigation, specially undertaken for the present work. Every metallurgist, every manufacturer of steel, and all who are interested in the iron or steel industries, and all engineers who use iron or steel, should have a copy of this work. The table of contents includes chapters on Classification and Constitution of Steel; Carbon and Iron, Hardening, Tempering and Annealing; Iron and Silicon; Iron and Manganese; Iron and Sulphur; Iron and Phosphorus; Chromium, Tungsten, Copper; The metals occurring but sparingly in iron; Iron and Oxygen; Nitrogen, Hydrogen, Carbonic Oxide; The absorption and escape of Gas from Iron; The prevention of Blowholes and Pipes; Structure and related subjects; Cold Working, Hot Working, Welding; Direct Processes; Charcoal-Hearth Processes; The Crucible Steel Process; Apparatus for the Bessemer Process; Special Steels; Anti-Rust Coatings and Lead Quenching.

The marvelous increase in the value of real estate at Fort Worth, Texas, is well illustrated by a large sale just made. In 1888 Hurley Bros. bought a tract of 856 acres adjacent to the city for \$85,600. No particular improvements have been made, but at this recent sale 164 acres were sold for \$98,320, or \$600 an acre. Another tract of 209 acres has been sold for \$104,500, or \$500 an acre, and a third tract has been sold for \$24,000, and 425 acres yet remain unsold. A syndicate supposed to be Boston men has just purchased from these and adjoining lands 557 acres for \$320,500.

THE new Randolph-Macon academic building at Bedford City, Va., was dedicated last week. The building is a magnificent four-story structure erected in the most modern style at a cost of \$80,000.

PRACTICALLY all the stock in the Rivermont Co., at Lynchburg, Va., has been taken. A syndicate of Roanoke men has just taken \$700,000 worth.

# The North Carolina Steel & Iron Co.

## GREENSBORO, N. C.

### OFFICERS.

President,	JAMES A. ODELL.
Vice-President,	JULIAN S. CARR.
General Manager,	J. J. NEWMAN.
Treasurer,	SAM'L H. WILEY.
Attorney,	THEO. F. KLUTTZ.
Secretary,	CHAS. D. BENBOW.
Financial Agent,	ROBT. T. GRAY.

### Executive and Finance Committee.

J. A. ODELL.	D. W. C. BENBOW.	J. A. GRAY.
--------------	------------------	-------------

### DIRECTORS.

A. B. ANDREWS, Second Vice-President R. & D. R. R. Company, Raleigh, N. C.	THEO. F. KLUTTZ, Attorney at Law and President Yadkin R. R. Company, Salisbury, N. C.
JAMES A. ODELL, President Odell Hardware Co., Greensboro, N. C.	JULIAN S. CARR, President Blackwell's Durham Co-operative Tobacco Company, Durham, N. C.
JULIUS A. GRAY, President Cape Fear & Yadkin Valley R. R. Company, Greensboro, N. C.	D. W. C. BENBOW, Greensboro, N. C.
	ROBT. T. GRAY, Attorney at Law, Raleigh, N. C.

This company owns the famous "Ore Hill" property in Chatham County, N. C., that has been noted as an iron property for more than a century. Ores from it were used in the manufacture of iron during the revolutionary war. During the late civil war the Confederate government selected this locality as the site of large iron and ordinance works, because of the exceptionally high grade of its ores.

The lack of railroad facilities has made impossible, hitherto, the profitable utilization of these ores on any large scale. The locality is now, however, made accessible by the Cape Fear and Yadkin Valley Railroad, which passes through the property.

Some of the most noted iron men in America have examined and reported on these ores, and so far as the directors of this company know, there has never been an expert report on it that was not highly favorable.

Prof. Charles D. Wilber, Inspector of mines and mineral lands, formerly State Geologist of Illinois, and geologist and mining expert for the Northern Pacific Railroad, visited Ore Hill in 1884.

Extracts from his report and the opinions of Dr. E. Emmons, formerly State geologist of North Carolina, Prof. W. C. Kerr, State geologist, Prof. F. A. Genth, of Philadelphia, S. A. Richards, formerly Superintendent of Furnaces for the Joliet Steel Company, Mr. Thomas Graham, a prominent iron manufacturer of Philadelphia, and others, are published in the company's prospectus.

The Manufacturers' Record, of Baltimore, having learned of the proposed organization of this company, investigated, on its own account, the Ore Hill tract. The report of its expert, Mr. Thomas P. Williams, M. E., is also given in the prospectus.

The company recently employed Mr. Frederick H. Smith, of Baltimore, a noted mining engineer and mineralogist to examine the property. His report confirmed all that had been claimed, and he advised the company to build the furnaces. Mr. Smith is a man of such eminence in his profession that it would be superfluous to make any mention of the value of his report. He is a member of the American Society of Civil Engineers, a member of the American Institute of Mining Engineers, and an Associate of the American Institute of Electrical Engineers.

Coke for the furnaces will be brought from Pocahontas, 245 miles, by the Norfolk & Western and Cape Fear & Yadkin Valley Railroads, which will connect at the State line near Mt. Airy, N. C.

In the organization of the company its projectors had in view:

- 1st. The building of furnaces for the manufacture of iron and steel, and ultimately the building of rolling mills and other industries for the utilization of the product of the furnaces.
- 2nd. The acquisition of a considerable area of land around the locality that might be selected as the site of the furnaces, in order that the company might itself enjoy the results of its own work, by getting the benefit of the increase in real estate values that would follow the establishment of furnaces and other industries.
- 3d. The inauguration of a general development and town building enterprise, starting with an attempt to secure the location on its property of iron, wood, textile and other industries, thus bringing together an aggregation of factories and stores, and a continually increasing population, with the resulting need for land for business and residence purposes.

### LOCATION OF WORKS.

The Company, after much deliberation, fixed upon Greensboro as being by far the most desirable place for the location of its works. It was selected because of its central location, its important railroad connections, its equable climate and remarkable healthfulness, its thrifty, enterprising and progressive spirit, and its unsurpassed advantages for general manufacturing. It is on the main line of the Richmond & Danville system, one of the greatest North and South lines. It is on the Cape Fear & Yadkin Valley Road, which, with the recent completion of its extension from Fayetteville to Wilmington, and the connection to be made next year at the State line near Mt. Airy, with the Norfolk & Western, will be an East and West trunk line, furnishing connection with the West, and a tidewater outlet. Another outlet to the sea will be afforded by the road the Richmond & Danville Company

is now building from Raleigh to Norfolk. The Winston and Wilkesboro branches of the Richmond & Danville, penetrating the Bessemer ores of Western North Carolina, have their starting point at Greensboro. Southeast of Greensboro are hundreds of thousands of acres of magnificent timber, uncultured, long-leaf pine and several varieties of hardwood.

With the impetus given it by this enterprise and with its advantages for iron and steel making and the manufacture of products using these as raw material, its advantages for woodworking shops of every sort, for textile industries and for manufacturing in general, together with its attractions as a place of residence, Greensboro ought to become one of the most important centers of industry in the South, the industrial and commercial metropolis of North Carolina.

### TOWN SITE PROPERTY.

Before announcing its purpose the Company, through its agents secured options on about 2,500 acres of very desirable property adjacent to Greensboro, some of it being within the corporate limits, and the whole of it being in an almost solid body. About 1,500 acres have already been purchased, and the remainder is being taken up as the options expire. The whole of it has been secured at an average price of \$25.00 an acre. This is no more than has been paid for the town site lands on which most of the industrial towns of the South have been built up, and in comparison with which this has the immeasurable advantages of extensive railroad connections and facilities unexcelled by any of them, an attractive, progressive town of 7,000 people to start with. Water works, gas works, electric light works, paved streets, churches and schools, elegant houses, an established society, and all the attractions that pertain to an old community.

### EXTRACT FROM MR. SMITH'S REPORT.

"The city now containing 7,500 people, is at the crossing point of three railroad systems, giving inlet and outlet from and to six different directions, and with other lines in prospect. The Cape Fear & Yadkin Valley Road passes through iron bearing formations from Sanford, through Greensboro to Mt. Airy. The North Carolina Road is in iron bearing formations from near Durham through Greensboro to Wilkesboro, and is to be extended through Cranberry Iron Gap at an early day, while the main Richmond & Danville Road is in sight of mineral formations from Lynchburg, through Greensboro to Charlotte and King's Mountain, and via Salisbury to the Blue Ridge and French Broad iron ores.

The local features are such that a short belt railroad line will economically connect all the railroad systems throughout your Company's lands and afford access from all directions to the properties which are most admirably located for the building up of industrial enterprises.

With the iron ores in all directions, and the Deep River coal so near, and the Pocahontas and other Virginia coals and ores so soon to be reached via Mt. Airy and the Cripple Creek branch of the Norfolk & Western, and the early connection with Roanoke, I recommend the early construction of two furnaces of about seventy-five tons daily capacity at Greensboro, to be followed up by rolling mills, converter and other plant for utilizing the product of the furnaces. I suggest two furnaces because there is a large amount of ore within reach which will output better results if smelted for iron than for steel, while the other ores will make steel pig.

The rolling mill should be made heavy enough to roll steel, and the housings and power will thus easily cover rolls for larger sizes of iron.

Foundries and machine shops to further utilize the iron and steel products should come with the furnace and mill, and then car shops and other enterprises to use the iron in connection with the fine timber regions to which Greensboro has such easy and cheap access. Greensboro is the best converging point for a large territory that is rich in iron ores, coal and timber, and if these resources are properly availed of, there is a large development in sight."

### LAND SALES.

Judging from the experience of other development enterprises, it would seem to be within a reasonable and conservative limit to expect within two years to realize from sales of lots, covering a comparatively small part of the total area of land purchased, an aggregate sum equal to the capital stock of the company. This, when added to the expected profit from this company's furnaces and other works, makes the opening for the investment of capital one of the most inviting that has been presented to the public since the beginning of the present industrial era in the South.

The company will build at once two furnaces, one to make Bessemer iron and the other mill and foundry iron.

### ANALYSES OF ORES.

	Metallic Iron.	Phosphorus.
Prof. W. C. Kerr's report.....	57.41	none
Dr. O. D. Allen.....	58.67	none
" " ".....	59.62	.224
" " ".....	54.90	none
" " ".....	57.12	none
Crane Iron Company.....	53.74	none
" " ".....	51.36	.219
Booth, Garrett & Blair.....	53.16	1.531
" " ".....	60.90	.219
" " ".....	56.17	.430
S. A. Richards.....	59.00	.038
" " ".....	67.48	none
" " ".....	68.74	none
Prof. F. A. Genth.....	57.68	none
" " ".....	59.03	none
" " ".....	67.60	none
" " ".....	57.32	none
H. B. Nye.....	54.80	.276
" " ".....	58.90	.038
Frederick H. Smith.....	53.20	0.408
" " ".....	49	.037
" " ".....	60.48	.05

### THE CAPITAL STOCK OF THE COMPANY IS \$1,000,000.

Subscriptions have already been received for about \$300,000 at par. None of the stock will be sold at less than par. The proceeds will go into the treasury to be used for development purposes with a view to making valuable the company's lands.

It is probable that when one-half the stock (\$500,000) has been subscribed for, the books will be closed until after the first land sale.

For particulars as to time of payment, &c., address the company at Greensboro, N. C.



# CARDIFF.

## The Cardiff Coal & Iron Company,

**CARDIFF, TENNESSEE.**

Capital, \$5,000,000.

Fifty Thousand Shares—Par \$100.

(CHARTERED BY THE STATE OF TENNESSEE.)

### PRESIDENT.

B. D. SMALLEY, BURLINGTON, VT., President of the Ogdensburg & Lake Champlain Railroad Company.

### VICE-PRESIDENTS.

W. P. RICE, FORT PAYNE, ALA.

HENRY C. YOUNG, CARDIFF, TENN., of Cordley & Co., Bankers, Boston, Mass.

GENERAL MANAGER, - - - M. M. DUNCAN.

### DIRECTORS.

THE PRESIDENT & VICE-PRESIDENTS, Ex Officio.

JOSHUA L. CHAMBERLAIN, NEW YORK CITY, N. Y., Ex-Governor of Maine and President of Bowdoin College; Ex-President of the Association of the Army of the Potomac.

WILLIAM WARNER, KANSAS CITY, MO., of Warner, Dean & Hagerman, Counsellors-at-Law; Ex-Member of Congress from Missouri, and Commander-in-Chief of the Grand Army of the Republic.

SAMUEL E. PINGREE, HARTFORD, VT., Ex-Governor of Vermont; Chairman of the Board of Railroad Commissioners of Vermont.

CHARLES L. JAMES, BOSTON, MASS., of James & Abbot, Lumber.

T. G. MONTAGUE, CHATTANOOGA, TENN., President of the First National Bank of Chattanooga; Director of the Roane Iron Co.

ROBERT PRITCHARD, CHATTANOOGA, TENN., of Pritchard, Sizer & Thomas, Counsellors-at-Law.

J. F. TARWATER, ROCKWOOD, TENN., of Tarwater & Brown, Iron Miners.

J. M. FORD, KANSAS CITY, MO., President of the Fort Payne, Ala., Furnace Co., and of the First National Bank of Denison, Texas.

CARLOS HEARD, BIDDEFORD, ME., Merchant.

JOHN M. WHIPPLE, CLAREMONT, N. H.

### FISCAL AGENTS IN THE NORTH.

CORDLEY & CO., BANKERS, 121 Devonshire Street, Boston, Mass.

### BANKERS IN THE SOUTH.

FIRST NATIONAL BANK OF CHATTANOOGA, TENN.

### TRANSFER AGENTS.

AMERICAN LOAN & TRUST COMPANY, BOSTON, MASS.

THE CARDIFF COAL & IRON COMPANY, at a public sale held April 22d to 24th sold over one million dollars' worth of business and residence property to investors, who will build on and improve the same at once. The prices were conservative and maintained within the limits of actual value. The proceeds of this sale, together with the sum to be contributed by the Cardiff Coal & Iron Company from the sale of its treasury stock, gives the management two million dollars, all of which will be expended in building up the town. The place does not exist that can approximate the inducements that this city now offers to every class of industry and manufacture.

**SITUATED IN A HEALTHY CLIMATE,**

**SUPPLIED WITH PURE WATER,**

**EXCELLENT TRANSPORTATION FACILITIES,**

## In the Heart of the Great Iron and Coal Belt of Tennessee,

Surrounded by a rich agricultural community, with every class of business sustained by the demands of the country, Cardiff will furnish to the Manufacturer, the Merchant, the Banker, the Professional Man, the Farmer, the Miner, the Laborer all that reason demands.

**Financial Encouragement will be Given Every Class of Business.**

The Cardiff town site contains over 3,000 acres. The building of Cardiff is in charge of men of approved judgment and experience. The town will be developed by the erection of Iron Furnaces, Coke Ovens, Hotel, Water Works, Motor Line, Electric Lights, Manufacturing Plants, Public Buildings.

# MIDDLESBOROUGH,

## KENTUCKY.

### There Are Now Under Contract:

A Basic Steel and Iron Plant, daily capacity 300 tons, to cost \$1,000,000 and to employ about 1,000 hands.  
 An Iron Rod Mill; A Sheet Mill; A Nail Mill.  
 Two Coke Iron Furnaces, 150 tons daily capacity each, and one Charcoal Furnace.  
 A \$500,000 Tannery—the largest in the world  
 Fourteen Coal Mining Enterprises, to employ about \$2,000,000 capital.  
 A Dozen Wood-Working Enterprises.  
 A Twelve-Mile Belt Railroad  
 Tile Works, Fire and Building Brick Works, and a dozen or more other enterprises.

## \$18,500,000

### Already Invested in the Development of Middlesborough.

Since the above announcement was made, Mr. A. A. Arthur, the manager of the company, has returned from London, where he secured an additional **\$8,000,000** to be invested in Middlesborough enterprises.

The capital of the Water Works Company has been increased from \$200,000 to \$750,000.

The capital of the Electric Street Railway Company has been enlarged to \$250,000 and the proposed lines extended so as to cover all the principal streets.

The length of the Belt Railroad has been increased to 20 miles, and the whole line will be in operation in a few weeks.

The money has also been secured for an extension of the Knoxville, Cumberland Gap & Louisville Railroad through the tunnel into Middlesborough. There is now under negotiation a lease of railway systems, of which the Knoxville, Cumberland Gap & Louisville road will form a link, giving Middlesborough trunk line connection with Chicago, Cincinnati, Louisville, Atlanta, Charleston, Savannah and Pensacola. Arrangements are also being made for direct connection between Cumberland Gap and some point on the Atlantic coast, and following this will be the establishment of a line of steamers between that point and Liverpool.

\$400,000 has been secured for the Middlesborough Coal and Iron Bank, which is now a regular department of the American Association's business.

The entire capital of the Cumberland Gap Park Company, \$1,800,000, has been secured in London. Contracts

have been let for the magnificent hotel, casino, sanitarium and other buildings.

The Middlesborough Hotel Company's capital has been increased. The company is now making an addition to its present building at a cost of \$25,000. Contract has been let for new hotel with ball room, casino and all the attractions and appointments of a first-class house, to cost \$75,000.

Contract has just been made for a new office building for the American Association, to be of stone and to cost \$35,000. A new office building will also be put up for the Middlesborough Town Company, the material to be stone and brick.

The Ousiotto Building Company, with a capital of \$250,000; the Manchester Building Company \$200,000; the St. Helen's Building Company \$200,000, and the New South Building and Loan Company with \$100,000, have been organized.

The eminent engineer, Mr. George E. Waring, Jr., of Newport, R. I., has been given the superintendency of contracts for a system of sewerage for Middlesborough and for the continuation of the work of straightening the stream that flows through Middlesborough. These improvements will cost \$150,000.

Mr. Arthur completed plans for a residence town at Cumberland Gap in connection with the American Association's developments. The amount secured for this purpose was \$750,000. The laying out of these lands has been given to Mr. George E. Waring, Jr.

The Watts London Iron and Steel Syndicate will increase its capital to £1,500,000 (\$7,500,000) and build other industries in addition to those already announced. Of the two furnaces now building the first will blow in early next October, and the second in November. Two other furnaces will be let to contract January 1.

Parties from Manchester, London and Liverpool will attend the May auction sales at Middlesborough, and will come with \$500,000 to invest in Middlesborough lots. Other parties are coming to form subsidiary companies to operate at Middlesborough in addition to those enumerated above.

The Northern American Association has been formed with a capital of \$3,750,000 to develop 200,000 acres of Kentucky coal lands; also the Anglo-American Association, with capital of \$2,000,000, to develop 80,000 acres of Kentucky coal lands, and the Western American Association, with capital of \$3,000,000, to develop 150,000 acres of coal and iron lands in Tennessee.

Counting the new enterprises arranged for on this trip and the additions to the capital of such as had been already announced, Mr. Arthur has secured nearly \$8,000,000 to be invested at Cumberland Gap. This is **\$8,000,000 of new money to be added to the millions already invested.**

Thus the Amount of Capital now Invested in the Development of Middlesborough reaches

## \$26,500,000.

Besides this, the three coal and iron companies mentioned above, whose aggregate capital is **\$8,750,000**, are closely allied to the American Association and the Middlesborough Town Company, and their developments will be made to contribute to the growth of Middlesborough.

The history of the world does not show an instance of

such amazing development in so short a time, and on so sure and solid and permanent a foundation.

A year ago the population of the present site of Middlesborough did not exceed 50; to-day the town has a population exceeding 5,000. It is a conservative estimate to say that in three years 50,000 people will be living here.

## MIDDLESBOROUGH TOWN CO., Middlesborough, Kv.



# KIMBALL.

MARION COUNTY,

TENNESSEE.

## KIMBALL TOWN COMPANY.

**H. I. KIMBALL,**

Vice-Prest. & Managing Director.

### DIRECTORS.

HON. LOGAN H. ROOTS, President of First National Bank, Little Rock.  
CHARLES P. RICHARDSON, Capitalist, Chattanooga.  
J. R. STEVENS, President First National Bank, Huntsville, Ala.  
A. J. MORISON, Capitalist, London, England.  
J. H. BRYANT, President Seattle Coal & Iron Co., New York.  
GEO. COOK, President Hallet & Davis Piano Co., Boston, Mass.

HON. H. L. COCHRAN, Judge Probate Court, Fort Payne, Ala.  
H. I. KIMBALL, Atlanta, Ga.

### OFFICERS.

President, HON. LOGAN H. ROOTS.  
Vice-President, C. P. RICHARDSON.  
Second Vice-President and Managing Director, H. I. KIMBALL.  
Treasurer, J. H. BRYANT.  
Assistant Treasurer, ED. E. RICHARDSON.  
Secretary W. E. DONALDSON.  
Assistant Secretary, W. BROOKS COVELL.

### ATTORNEYS.

W. E. DONALDSON, Kimball.  
SHEPHERD, WATKINS & BATES, Chattanooga.

### ENGINEERS.

Landscape Engineer, NATHAN G. BARRET.  
Resident Engineer, W. J. KELLY.  
Sewerage and Electrical Engineers, NIER, HARTFORD & MITCHELL.  
Hon. SAM'L H. BUCK, Gen. Superintendent.  
OFFICES.  
Richardson Building, Chattanooga.  
Union Trust Building, 80 Broadway, New York.  
Company's Building, Kimball, Tenn.

### Kimball Offers

Solid, practical inducements to manufacturers. First-class enterprises under good management will be guaranteed, one-half the cash required. Local taxes will be remitted for a term of years. Lowest freights and cheapest raw materials will be secured.

### Auxiliary Companies

will be organized by the parent corporation for developing the wealth of the Sequachee Valley and for supplying the city with heat, light, water, power and transportation.

### A Mammoth Industrial Building

will be erected by the Kimball Town Company, which will have power, light and heat, that will be supplied to manufacturers on the most liberal terms.

Ample provision made for religious and educational institutions.

### No Further Auction Sales

this year and no private sales of the corporation's lots except to those who will contract to build immediately on plans approved by the management.

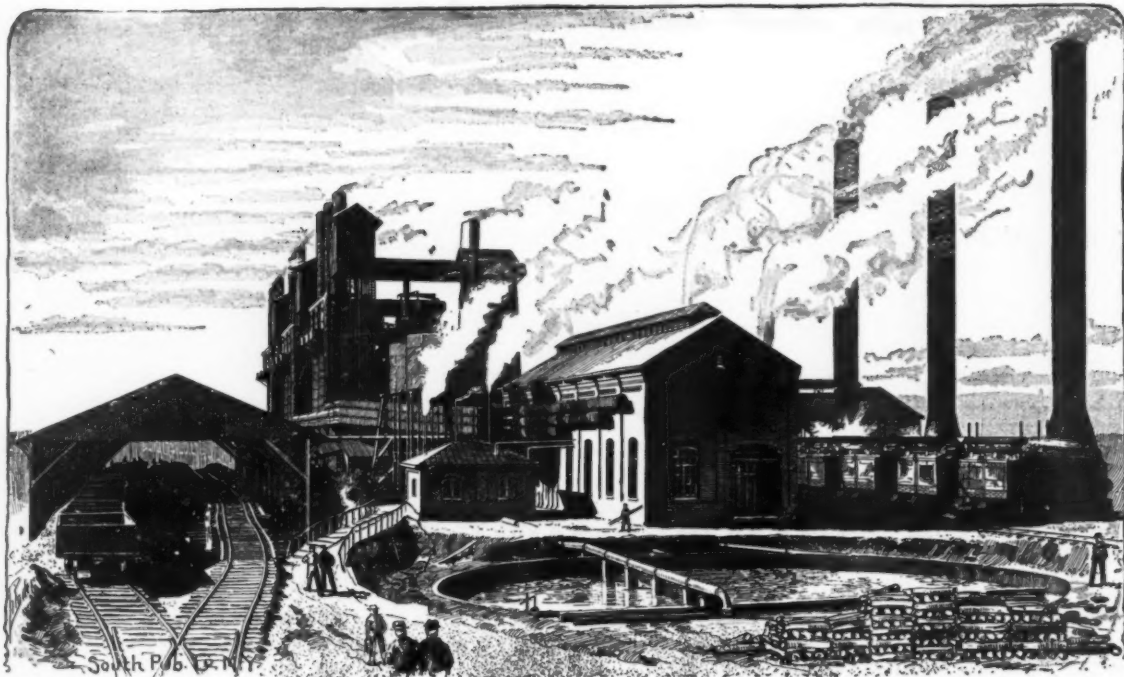
ALL CORRESPONDENCE SHOULD BE ADDRESSED TO

H. I. KIMBALL, Managing Director,

CHATTANOOGA, TENN.

# SHEFFIELD, ALA.

## THE SUPERB.



At the Headwaters of Deep Navigation on the Tennessee River, the Hudson of the South.

The Largest Producer of HIGH-GRADE Pig Iron of any City in the Entire Industrial South.

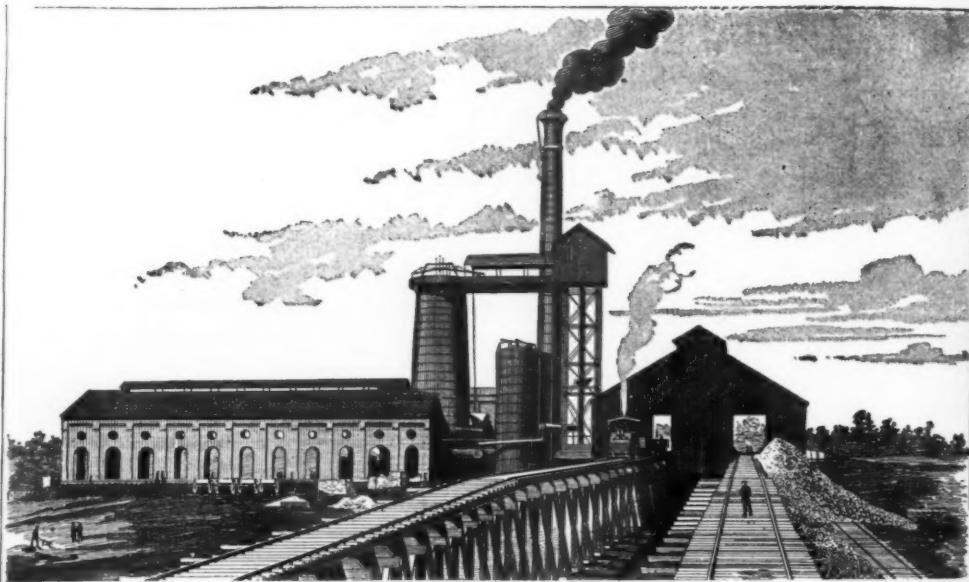
The only point in the South that has or can ship pig iron to the cities on the Mississippi, Missouri and Ohio rivers by boat or barge without rehandling. This last shipment of 5,000 tons of Pig Iron to Pittsburgh, Pa., by barge was made at a saving of \$2.65 per ton over what any iron-producing city of the South has done or can do to-day.

Five Large Blast Furnaces

Capacity 750 tons pig iron per day.

The following are among the corporate and private enterprises that belong to Sheffield:

The Sheffield Land, Iron & Coal Co., capital \$1,000,000.  
 The Sheffield & Birmingham Coal, Iron & Railroad Co., capital \$1,000,000; the owners of three 150-ton blast furnaces.  
 The Birm., Sheffield & Tenn. River Railway Co., capital \$5,000,000.  
 The Hattie Ensley Furnace, capital \$200,000.  
 The Lady Ensley Furnace Co., capital \$200,000.  
 The Electric Light & Gas Fuel Works, \$50,000.  
 The Sheffield Ice Co., capital \$25,000.  
 The Sheffield Manufacturing & Constructing Co., \$30,000.  
 The Sheffield Contracting Co., \$50,000.  
 The Eureka Brick & Lumber Co., \$30,000.  
 The Howard Brick Co.  
 The Sheffield Bakery & Bottling Works.  
 The Sheffield Mineral Paint Co., capital \$50,000.  
 The Sheffield Agricultural Works, capital \$40,000.  
 The Sheffield Cotton Compress Co., \$60,000.  
 Millan Brothers, Steam Laundry.  
 Enterprise Publishing Co.  
 Water Works, already expended, \$30,000.  
 Sheffield Street Railway Co., capital \$100,000.  
 Cleveland Hotel Co., capital \$50,000.  
 Sheffield Hotel Co., capital \$120,000.  
 Bank of Commerce, capital \$150,000.  
 East Sheffield Land Co., capital \$500,000.  
 Hull & Keller's Fern Quarries.  
 Mobile Real Estate Co., capital \$50,000.  
 Sheffield Real Estate Co., capital \$50,000.  
 Sheffield & Mobile Improvement Co., capital \$100,000.  
 Sheffield Stove Works.  
 Henderson Milling Co., capital \$100,000.  
 Globe Iron & Brass Works, capital \$10,000.  
 Standard Machine Shop & Foundry, capital \$50,000.  
 Owen Pink Mixture Co., capital \$100,000.  
 Bell Telephone & Telegraph Co.  
 Foulds' Shoe Factory, capital \$20,000.  
 Enterprise Wood Working Co., capital \$30,000.  
 Buchanan Straw Goods Factory, \$25,000.  
 The Sheffield Harness & Saddlery Co., capital \$20,000.  
 Principal Shops of the Sheffield & Birmingham Railroad.  
 Principal Shops Memphis & Charleston Railroad, now being built.



Aside from the foregoing the following are in course of construction and may be considered positive: Principal Shops of the Memphis & Charleston Railroad; Principal shops of the Nashville, Florence & Sheffield Division of the Louisville & Nashville Railroad. Reasonably certain to be secured in the near future are the following, in regard to which negotiations are pending: A Rolling Mill; Large Machine Shop; A Cotton Mill.

## ALABAMA'S IRON CITY.

The Superb Location at the head of navigation on the Tennessee River, commanding the outlet to immense fields of IRON ORE and COAL and magnificent tracts of the finest Timber. Has already attracted to the spot where three years ago in a cotton field her projectors set the stakes of a new city, capital and people, unequalled in amount and number, circumstances considered, by any of the so-called new cities of the South.

With eight Church Organizations, two Free Public Schools, Postoffice, Telegraph and Express offices and abundant facilities of transportation by river and rail. It has every advantage as a residence city that can be desired.

Good Water; Drainage Excellent; Health and Climate Unsurpassed. Free Public Schools and Churches. Splendid opening for men of push and energy. No better point for profitable investment. No "Old Fog" element here.

### Sites for Manufacturing Enterprises

And for Free Public Schools and Churches

Donated by the Sheffield Land, Iron & Coal Company.

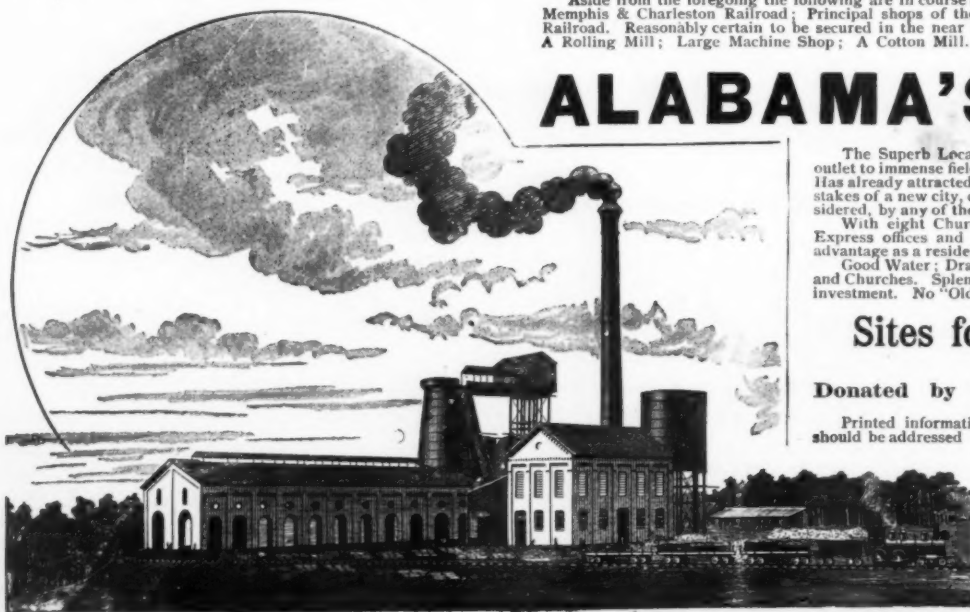
Printed information furnished on request. Correspondence solicited. Communications should be addressed

**W. L. CHAMBERS,**

Vice-President and Manager.

Sheffield Land, Iron & Coal Company,

SHEFFIELD, ALABAMA





# The Staunton Development Co.

## OF STAUNTON, VIRGINIA.

Authorized Capital \$2,000,000.

Shares \$100 par value each.

### OFFICERS

M. ERSKINE MILLER, President, Staunton, Va.

S. M. YOST, Vice-President, Staunton, Va.

W. P. TAMS, Treasurer, Staunton, Va.

W. J. PERRY, Secretary, Staunton, Va.

### DIRECTORS.

ISAAC WITZ, Staunton, Va.

B. F. EAKLE, Staunton, Va.

JOHN McQUAIDE, Staunton, Va.

ANDREW BOWLING, Staunton, Va.

S. M. YOST, Staunton, Va.

JED HOTCHKISS, Staunton, Va.

J. H. WAYT, Staunton, Va.

M. ERSKINE MILLER, Staunton, Va.

O. K. LAPHAM, Chicago, Ill.

H. H. FAY, Capitalist, 28 State Street,  
Boston, Mass.

W. L. FLEMING, Richmond, Va.

GEORGE H. HULL, President American

Pig Iron Storage Warrant Company, 44  
Wall Street, New York.

# STAUNTON, VIRGINIA.

The Queen City of the Valley of Virginia.  
Present Population 12,000.

Situated in Augusta county at the crossing of the Baltimore & Ohio and Chesapeake & Ohio railroads and accessible to the great coal and coke fields, namely: Connellsville, by the Baltimore & Ohio; Pocahontas or Flat Top by the Norfolk & Western and Chesapeake & Ohio, and New River Coke Fields by the Chesapeake & Ohio.

### PROPERTY.

The lands acquired, aggregating 2,242 acres, more or less, are favorably situated within the city limits and adjoining the corporation lines, and it might be fairly said that about 240 acres are situated within the city of Staunton. The great bulk of the property lies between the Valley Railroad or Baltimore & Ohio Railroad and the Chesapeake & Ohio Railway, and is most admirably situated for railroad switches and side tracks to reach manufacturing enterprises. Several streams of good water run through the lands, affording abundant water supply for factories and fine drainage.

### CAPITAL STOCK.

The authorized capital is two million dollars. One million, two hundred thousand dollars of stock will now be issued,

of which \$204,800 has been disposed of, leaving \$800,000 of stock in the treasury, to be hereafter issued, if it should be deemed wise to do so.

Subscribers will bear in mind that with every two shares of stock they will be entitled to either a business or residence lot, to be determined by a drawing at a date to be hereafter designated.

### BOOKS OF SUBSCRIPTION NOW OPEN.

Staunton is within six hours' ride from Washington, seven of Baltimore, nine of Philadelphia and eleven of New York.

It has an excellent system of water works, paid fire department, electric light and gas companies, ice factory, street car line under construction, four newspapers, handsome opera house, commercial college and other important industries that contribute to the welfare of the city.

# GLASGOW, —————→

# ←————— VIRGINIA.

The Grandest Enterprise of the New South.

## THE LOCATION

is naturally fine and adapted to the construction of a large city.

## THE CLIMATE

guarantees immunity against epidemics.

## WATER-POWER

is practically unlimited.

## IRON ORE

in abundance and of fine quality.

## LIMESTONE

near at hand and plentiful.

## CEMENT

extensive deposits of good quality.

## GLASS SANDS

in large quantities and of high grade.

## TIMBER

of various kinds and abundant.

## FUEL SUPPLY

Pocahontas and New River Coke in convenient proximity.

## TRANSPORTATION FACILITIES

Two trunk lines—Norfolk & Western, with its Shenandoah Valley Railroad connection, and the Chesapeake & Ohio—giving direct communication with fields of finest Coaking and Steam Coals in the country, with deep water transportation with Norfolk & Newport News, with the West via Cincinnati.

## THE PITTSBURG & VIRGINIA R. R.

to be built in the near future will go through the Blue Ridge mountains at this point.

## FACILITIES FOR MANUFACTURING

unexcelled by those offered by any locality in the South.

## ADDRESS

# ROCKBRIDGE COMPANY,

Ex-Gov. FITZHUGH LEE,

Hon. WM. A. ANDERSON,

M. M. MARTIN,

President

Vice-President.

General Manager.



# DENISON, TEXAS.

The "QUEEN" City of the Southwest,

— AND —

✱ GATEWAY ✱

— TO THE —

## GREAT STATE OF TEXAS.

The City of Denison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

**D**ENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Denison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, and a six-mile motor railway; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1889. 200,000 baskets of strawber-

ries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has one of the largest canning factories in the country.

A cotton mill company with a capital of \$500,000 is building a 25,000-spindle cotton mill.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory has been increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

## THE DENISON LAND & INVESTMENT COMPANY,

DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

### OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President.

B. J. DERBY, General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

### DIRECTORS:

W. P. RICE, Kansas City, Mo.  
J. M. FORD, Kansas City, Mo.  
SAM STAR, Denison, Tex.

B. J. DERBY, Burlington, Vermont.  
ARTHUR L. BERRY, Denison, Tex.  
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.  
B. C. MURRAY, Denison, Texas.  
JOS. B. LINCOLN, Boston, Mass.

# WAYNESBORO, VA.

## THE WAYNESBORO COMPANY.

### LOCATION

In the famed Shenandoah Valley. Perfect for every class of business and residence.

### CLIMATE AND HEALTH

All that could be desired. Free from rigor of North and enervation of the South. No epidemics No malaria.

### ORES

Iron in inexhaustible quantity and fine quality. Manganese—largest mine in America near at hand, and every evidence of much undeveloped, making this the center of the manganese belt of the country.

### LIMESTONE

In massive beds close at hand and of best quality.

### TIMBER

Of every species and very abundant. Tan bark in large quantities.

### FUEL

Pocahuntas and New River coal and coke by short hauls.

### WATER SUPPLY

Unsurpassed. Pure freestone. Mineral Waters adjacent.

### HOTEL

To have every modern improvement and appointment and to cost \$25,000, will be let to contract within ten days.

### TRANSPORTATION

Two competing trunk lines—Norfolk & Western system to all points North and South, the Chesapeake & Ohio to the great West and deep water at Norfolk and Newport News—affording direct communication with the three great coking fields of America. A third railroad to be built, giving facilities over the B. & O. System.

### MANUFACTURING FACILITIES

Unexcelled by any locality in the South for profitable establishment of furnaces, steel plants, rolling mills, foundries, cotton mills, woolen mills, paper mills, tanneries, &c. Raw material for such industries abundant.

Special Inducements Offered to Parties Wishing to Locate Plants.

ERSKINE MILLER,

President.

T. H. ANTRIM,

Vice-President.

J. F. TEMPLETON,

Secretary and Treasurer.



# GRAHAM, VA.

~\*~ Tazewell County. ~\*~

## THE FAVORED SECTION.

### *The Graham Land & Improvement Company.*

#### OFFICERS.

A. C. DENNISTON, - - - - - President.  
EDWARD ILSLEY, - - - - - Vice-President.  
F. J. COLLINS, - - - - - Secretary and Treasurer.

#### DIRECTORS.

A. J. MAY, Tazewell C. H., Va. THOS. GRAHAM, Philadelphia Pa.  
C. M. CLARK, Philadelphia, Pa. J. B. GREEVER, Graham, Va.  
J. D. SERGEANT, Philadelphia, Pa. J. H. DINGEE, Philadelphia, Pa.  
A. C. DENNISTON, Philadelphia, Pa.

### R. K. WRIGHT, JR., Agent, Graham, Va.

The Graham Land & Improvement Company has purchased about 900 acres of land, including the old town of Graham, at the junction of the Clinch Valley & Ohio extension of the Norfolk & Western railroad, in Tazewell county, Va., and has improved the property by laying it out in lots and streets. Several of the streets have been graded and macadamized. The work of macadamizing is being continued with great activity.

The land is so situated, being at the junction of two important branches of the Norfolk & Western Railroad, with the Bluestone river running through it, and in close proximity to the Pocahontas coal fields—the finest coking coal in the world—and the iron ore deposits of the Clinch Valley, that it will in a short period become an important iron manufacturing center as well as a distributing point for the entire coal field.

The Clinch Valley & Ohio extension of the Norfolk & Western Railroad runs through a section of country heavily covered with popular, white and chestnut oak timber, and it is believed that Graham, at the junction of these two branches, is a most desirable location for the establishment of saw mills, tanneries, pulp mills and other woodworking establishments.

The company proposes to donate sites to all worthy manufacturing enterprises, and stands ready to take a limited amount of their stock.

#### The Following Desirable Industries have been Already Secured:

The Graham Furnace Company, with a capital of \$250,000, has under construction an iron furnace, dimensions 16x70 feet, with a capacity of about 100 tons per day, and expects to be in blast by October.

The Virginia Lumber Company, with a capital of \$50,000, are erecting their buildings and will be in operation by the 1st of July.

Arrangements are also being made with parties who propose building at once a large general supply store and warehouse, building to cost about \$10,000, and having a working capital of not less than \$50,000.

The Graham Transparent Ice Company has been organized with a capital of \$50,000. Part of the machinery is now on the ground.

A large furniture factory has been organized with a capital of \$50,000.

Mr. Thomas B. Graham has secured a site on which he will erect a flouring mill with a capacity of thirty-five barrels, and expects to be in operation within sixty days.

The Graham Land & Improvement Company have made arrangements to supply the new town with water. The capacity may be extended to 2,500,000 gallons.

The Furnace Company has contracted to put in an electric-light plant for the purpose of lighting up their grounds, the Graham Inn and the commercial part of the city.

Work has been commenced by the Norfolk & Western Railroad Company on the building of a grand Union Passenger Depot at the junction and terminus of the Clinch Valley division, New River division and Ohio extension of the Norfolk & Western Railroad.

The Graham Land & Improvement Company are now building a fine hotel, which they hope to have ready for occupation by October 1st. The hotel will be heated by steam and lighted by electricity, and it is the aim of the company to make it one of the most attractive hotels in Virginia.

The Graham Publishing Company has been formed with a capital of \$12,000, all of which is subscribed.

#### Projected Enterprises:

Woolen mill, \$50,000.

Flour mill, 75 barrels capacity, \$35,000.

A muck bar rolling mill company with a large capital.

On the 10th of April, 1890, the Graham Land & Improvement Company sold at auction \$165,000 worth of business and resident lots. During the same day the private sales were large, making a total of \$210,000.

Lots are comparatively very cheap at current prices.

Capital stock \$250,000, one hundred dollars per share. Present worth one hundred and fifty dollars per share and none to be had.

**FINANCIAL CIRCULAR.**

First Mortgage Six Per Cent. Gold Bonds

— OF THE —

# INGALLS IRON & COAL CO.

Due July 1, 1910.

Interest Payable January 1 and July 1.

AT THE OFFICE OF THE

INTERNATIONAL TRUST CO., BOSTON, MASS.

INGALLS IRON &amp; COAL CO.

31, 32 and 33 Rialto Building,

P. O. Box, 5194. Cor. Milk and Devonshire Sts., BOSTON, MASS.

INTERNATIONAL TRUST CO., BOSTON, MASS.

Trustee under the Mortgage.

Register and Transfer Agents of the Company.

First Mortgage Six Per Cent. Gold Bonds

OF THE

## INGALLS IRON & COAL CO.

Capital Stock Five Million Dollars, Full Paid and Non-Assessable.  
First Mortgage, 20 Years, 6% Gold Bonds, \$500  
Each, \$3,000,000.

This company is chartered under the laws of the State of Virginia, and its iron property is located at Waynesboro, Virginia, at and near the junction of the Chesapeake & Ohio Railroad and the Shenandoah Valley Railroad, and its coal properties on the great Kanawha River and Chesapeake & Ohio Railroad, in Kanawha County, West Virginia. The properties are more particularly described in the prospectus herewith enclosed.

These properties aggregate ten thousand five hundred acres of coal and iron ore lands, with coal and iron ore mines in active and profitable operation. The bonds are due July 1, 1910. The interest is payable January 1st and July 1st of each year, at the office of the International Trust Company, Boston, Mass. The amount of issue authorized is three million dollars, but only one million five hundred thousand dollars are now offered for sale upon the following liberal terms and conditions.

These bonds will be sold at par. The purchasers will pay in cash 20%, and at the rate of 20% per month until the whole of their bonds are paid for, with the right on the part of the subscribers to anticipate all of the deferred payments on their subscription, at a rate of 6% discount per annum, (and as a bonus with the bonds) the company will deliver with each five-hundred-dollar bond three shares of the full-paid and non-assessable capital stock of the company. Par value of each share one hundred dollars.

The present earnings are ample to provide for the interest upon the first mortgage bonds. The interest upon the bonds for two years is guaranteed, as issued, by the International Trust Company of Boston, Mass.

The company's properties cost two million dollars, and from the sale of said bonds will be paid the one million dollars balance due upon the properties, and the balance in the treasury from the proceeds of sales of bonds to be applied for the erection of the company's plants and the residue of issue of bonds will be sold from time to time as they may be needed by the company, and if not needed will be cancelled.

There are no better investments to be found in the United States. The company's properties will be worth fifteen million dollars with the proposed improvements, as will

be seen from the prospectus. The location of these iron and coal properties is one which will enable the company to meet all competition with a good profit, under the most depressed condition of the iron and coal trade known in the last one hundred years.

The company's capacity for earning dividends is very great, and can only be limited by the amount of capital employed in working its vast store-houses of ores and coal, and increasing its manufacturing interests.

The company's coals are now being used in the great markets of this country, namely: Gallipolis, Cincinnati, Louisville, on the Ohio River, and points along the Mississippi River to New Orleans, and to cities and towns along the Chesapeake & Ohio Railroad to Newport News on the Chesapeake Bay. Its gas coals are being used in Richmond, New York, Philadelphia, Brooklyn and Boston.

The prospectus of this company has been prepared with a great deal of care and it will be found that everything is based upon actual facts; and all statements therein will be confirmed by the closest investigation.

The officers and directors of this company before accepting the positions now held by them, sent a special committee of their own number to examine all of the properties described in the prospectus, and found that everything therein was as represented.

It is a fact beyond all question that the district in Virginia in which the property of this company is located, is the only one that can successfully sustain New England in her great manufacturing interests in working pig iron into its various forms and uses.

The security for the payment of the bonds is unquestionable, because it is based upon the earnings of a profitable and well established business, and upon a property of very great and increasing value.

The purchasers of these bonds not only have a first mortgage of 6%, payable semi-annually; upon all the property of the company now owned or to be hereafter acquired, but in addition to this, they will receive with each five-hundred-dollar bond, three hundred dollars of the full paid and non-assessable capital stock of the company, which the directors and managers of the company confidently predict will earn from 6% to 10% dividends, from the improvements which will be made with the proceeds of all bonds sold, in excess of the amount required to complete the payment of the balance due for the properties.

For any further information that may be desired on the part of investors, address the office of the company, Rialto Building, Boston, Mass.

PROF. R. NEWTON POOL, President.  
J. WHITNEY BEALS, JR., Secretary.

H. M. CROSS, Vice-President.  
HERBERT B. CHURCH, Treas.

N. B.—Any persons desiring any information in reference to the character and value of the company's coals are respectfully referred to the Chesapeake & Ohio Coal Agency, 70 Kilby Street, Boston, Mass.



# MINERAL CITY, VA.

Capital Stock, = \$200,000,

PLACED IN 40 DAYS.

RICHEST AND MOST EXTENSIVE MINES OF

## \* \* \* PYRITES \* \* \*

YET DISCOVERED IN THE UNITED STATES.

NOW IN FULL OPERATION.

SHIPPING OVER 150 CARS WEEKLY.

Gold Ores that took Premiums in Philadelphia, 1876.

Iron Ores that have been Fully Tested—56 per cent. Metallic Iron

Copper Ores that have been Successfully Worked.

PLUMBAGO AND MICA IN ABUNDANCE.

ON THE GREAT CHESAPEAKE & OHIO SYSTEM OF RAILROADS.

With its Variety of Mineral and Shipping Advantages; Only 56 Miles

West of Richmond, Its Future is Assured.

Propositions to Erect Large Sulphuric Acid Works, a Phosphate Plant and Works for the Reduction of Gold Ores will be Entertained by the Company, and Liberal Inducements Offered to These and Other Manufacturing Plants.

FOR PARTICULARS ADDRESS

**W. R. GOODWIN, General Manager, Mineral City, Va.**

# 3,000,000 BRICK WANTED

For Immediate Use at

# BASIC CITY, VA.

The Lots and Lands of the Basic City Co. completely encompass the crossing of the **Two Great Coal-Carrying Lines of Virginia**, viz: the Chesapeake & Ohio Railroad and the Shenandoah Valley Railroad.

The company is offering *Extraordinary Inducements* for the removal and Establishment of **MANUFACTURING PLANTS**.

## LOCATION,

In the brown iron-ore district, at the crossing of the two great coal-carrying lines of Virginia, viz: the Chesapeake & Ohio and the Shenandoah Valley Railways.

## IRON ORE,

Brown Hematite Ore inexhaustible in quantity and excellent in quality.

## LIMESTONE

In close proximity and abundant.

## WATER

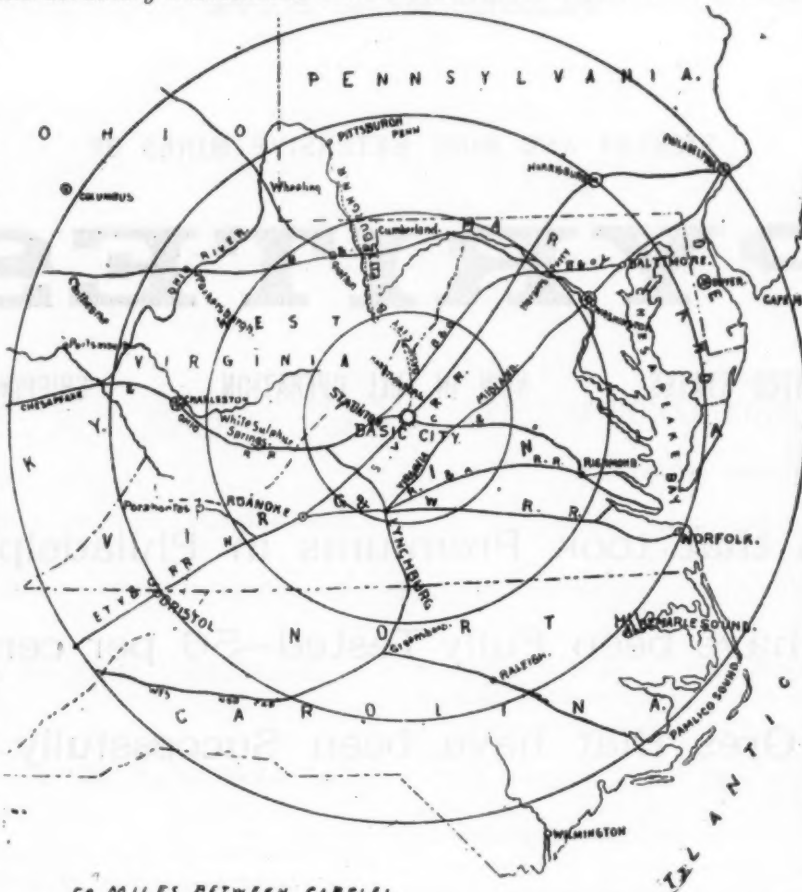
Pure free-stone. The South branch of the Shenandoah River flows through the property. A magnificent Lithia Spring and other medicinal waters.

## COUNTRY

Surrounding and tributary equal to any in the Shenandoah Valley in beauty, fertility and productiveness.

## TIMBER

Of almost every variety and plentiful.



## HEALTHFULNESS,

Unsurpassed. Elevation 1,300 feet, and natural drainage splendid.

## TRANSPORTATION,

At present by two independent railways, to the ocean, the West, and Northwest and the South, and a third, the Basic City, West Virginia & Pittsburgh Railroad soon to be built, connecting with the Baltimore & Ohio Railroad.

## INDUSTRIES.

Already secured a 100-ton Iron Furnace, Car Works, Paper Mill, Hardware Factory, two Blind, Sash and Building Material Factories, two Brick and Tile Factories, and others are being negotiated for. A large and handsome Hotel in course of construction, 250 feet long, with 85 rooms. The industries will employ at least 900 workmen.

Many new buildings are going up. Work is being pushed on plants for the industries just enumerated, and they will be in operation in a few months.

A Normal College with accommodations for 200 students.

# The Coming Iron and Steel Center.



FOR PARTICULARS AS TO THE SPECIAL ADVANTAGES OF BASIC CITY ADDRESS

**SAMUEL FORRER, President, or J. M. QUARLES, General Manager,**  
Basic City Mining, Manufacturing & Land Company, Basic City, Va.

Information as to the financial standing and resources of this Company may be had by addressing the AUGUSTA NATIONAL BANK or the NATIONAL VALLEY BANK, of Staunton, Va.



## EDMONDS & ROBINSON,

In the development of its agricultural, mineral and timber resources; in its general upbuilding and advancement, Texas is making more rapid progress than any other State in the Union. Its population is increasing at a stupendous rate. Millions of dollars from the West and Northwest, from the New England States and from England are pouring into the State for investment in factories, mills, railroads and commercial enterprises.

San Antonio is the commercial and financial center of the great South and Southwest Texas. It is a city of 55,000 population, is the center of the most important railroads in the State, has four national and five private banks, building and loan associations, a large number of industrial establishments and some of the largest jobbing houses in the Southwestern States.

### LAWYERS

AND DEALERS IN

## REAL ESTATE

In the matter of homes it is the handsomest city in America.

In twelve years it has grown from 20,000 to 55,000.

It is growing more rapidly now than at any former period.

Property in and around San Antonio and throughout Southwest Texas is increasing in value every day. *It will never again be as cheap as it is now.*

There is no place in the world offering greater inducements for the purchase of real estate, either for investment or speculation, with assurance of such large and certain profits.

## SAN ANTONIO, TEXAS.

B. R. HUTCHKRAFT, Pres.

A. GATLIFF, Vice-Prest.

D. C. EAVES, Sec'y and Treas

## THE SOUTHLAND INVESTMENT CO.

## REAL ESTATE, STOCK & BOND BROKERS

Room 45 Deaderick Building.

P. O. Drawer 6.

KNOXVILLE, TENN.

### OUR BUSINESS.

We Buy and Sell on Commission Real Estate, Stocks and Bonds.

Organize Companies to handle Mineral and Timber Lands

Report upon Costs of Mine Equipments, including Tramways and Railways.

Maps and Profiles Furnished. Reports upon Value of Lands and Abstracts of Titles Furnished

Act as Agents for Local and Non-resident Property-holders to Collect Rents and Sell Property.

Come and see us; if we do not have what you want we will get it for you.

List your property with us.

## JOHN C. FIELD,

## REAL ESTATE.

Town Lots, and Suburban Property.

BLUFFTON, ALA., and TREDEGAR [P. O. Jacksonville], ALA.

"The MANUFACTURERS' RECORD is the Most Widely-Quoted Industrial Paper in the World."

## BEDFORD CITY, VA.

(FORMERLY LIBERTY.)

The Most Beautiful Residence Portion of this Growing City is

## LONGWOOD PARK,

The Property of the Longwood Land & Improvement Co.

The property is within five minutes' walk of the N. & W. R. R. depot. It is intersected by broad, oak-shaded avenues, and divided into building lots averaging ninety feet front by 230 feet deep. A superb view of the beautiful Peaks of Otte visible from every part of the property. Prices range from \$6 to \$12 per front foot, according to location, &c.

**No Better Investment can be made than in Lots in Longwood Park, at these Prices.**

THE CITY HAS AN ESTABLISHED SOCIETY.

Churches, Schools and Academies, (among them the finest in the South,) Manufactures of many kinds, a magnificent supply of Free-stone Water, systems of Arc and Incandescent Electric Lighting, admirable Railroad Connections, a surrounding country of unlimited Mineral Resources and Great Fertility. For further information apply to


**R. KENNA CAMPBELL, Gen. Manager**

**The Longwood Land & Improvement Company.**

If you desire to establish

## A COTTON MILL

where you will have every advantage that could be asked, Tredegar is the place. It is surrounded by a rich cotton district producing a fine grade of long staple cotton; it is one of the healthiest places in the South; labor is abundant and cheap; the purest freestone water can be had, and a cotton mill can get its raw material right at its doors. Fine steam coal can be secured at the lowest price, making steam cheaper than water-power. Transportation facilities are good, and everything that could be desired to make cotton manufacturing profitable is at hand. The old name of Tredegar, and the present name of the postoffice is Jacksonville. It is the county seat of Calhoun County, which produces thousands of bales of cotton annually and is one of the richest mineral and agricultural counties in Alabama. Its present population is about 2,500 to 3,000, but this will be greatly increased by the building of many new industrial enterprises. For information regarding Tredegar's advantages for cotton mills or other enterprises, address GOLDSMITH BERNARD WEST, General Manager, Jacksonville, Ala.

 A Steel Plant to employ 3,100 hands has just been secured.

[For other information about Tredegar, see next page.]



Tredegar offers the most inviting field in the United States for the establishment of manufacturing enterprises.

It has unequalled advantages for

Iron and Steel Works, such as Furnaces, Rolling Mills, Machine Shops, Foundries and everything using iron.

Car-Wheel Works, Car Shops.

Cotton Mills, Knitting Factories, and other Textile Industries.

Cotton-Seed Oil Mills and Fertilizer Factories.

Woodworking Industries of every sort, Saw and Planing Mills, Sash, Door and Blind Factories, Furniture Factories, Handle and Spoke Factories, Agricultural Implement Works, Carriage and Wagon Factories, &c.

Brick Works for making Building Brick, Vitrified Brick, Fire Brick, &c.

Sewer Pipe Works.

And many other industries.

The most liberal inducements will be offered to those who desire to locate such industries.



# TREDEGAR, ALA.

Here are found :—

The finest Hematite Iron Ores in the South.

Extensive Manganese Deposits that experts from Pennsylvania and elsewhere believe to be the greatest in the United States.

Vast Forests of Fine Timber, Pine and many varieties of Hardwoods.

Never-failing Mountain Springs with a daily flow of many million gallons of the purest Freestone water, besides Sulphur, Chalybeate and other Mineral Springs.

A climate that has no superior for all the year; malaria is unknown, and the nights are cool even in midsummer.

A Fertile Agricultural Country, where cotton, grains, grasses, fruits and vegetables yield abundant crops, and where fine Jerseys wade knee-deep in clover.

A population of 3,000, churches of all denominations, excellent schools, charming society.

A National Bank, Water Works, Fine Hotel.

Will build Two Furnaces, Rolling Mill and probably Basic Steel Works, Cotton Mill, &c.

For particulars address GOLDSMITH B. WEST, General Manager JACKSONVILLE MINING & MANUFACTURING COMPANY, Tredegar (Present Postoffice, Jacksonville), Alabama.

# LAREDO, TEXAS.

## The Gateway to and from the Republic of Mexico.

Is nature's grand outlet for the manufactured products of the United States and nature's grand inlet for the mineral and raw products of Mexico. For the cheap delivery of the raw material necessary for the successful operation of iron and all textile industries, Laredo holds a position unsurpassed, every material being found in the immediate neighborhood. The very foundations of the city are upon inexhaustible coal beds, now being rapidly developed. A glance at the map will show that there are no large cities within hundreds of miles of Laredo, and her favorable geographical location, being from 600 to 800 miles nearer the trade centers of both republics than any other frontier port, stamps her as the commercial entrepot between the United States and Mexico.

Laredo is becoming a most important manufacturing point,

having the following industries already located and in operation:

- Woolen Mill.
- Wool Scouring Mill.
- Tannery.
- Boot and Shoe Factory.
- Ore Concentrating Works.
- Ore Sampling Works.
- Cotton Gin and Milling Works.
- Mineral Water Bottling Works.
- Four Ice Factories.
- General Car and Machine Shops of the Mexican National Railroad, the largest west of the Mississippi.
- Three Large Brick-yards and several smaller establishments.
- A large Cotton Factory is now being erected by a New England syndicate.

Laredo Offers to the Capitalist, Merchant, Manufacturer and Mechanic  
Opportunities for Investment, Business or Manufacturing such  
as no other City in the Southwest can offer.

The city is well supplied with railroad facilities and hotel accommodations, has Holly system of water works, two electric-light companies and one of the best equipped electric motor street railways in the United States.

	Popu ation.	Imports and Exports.
1886.....	3,000	
1888.....	6,000	1888.....\$ 3,000,000
1889.....	12,000	1889 ..... 10,543,000

*For Maps, Pamphlets, Bird's Eye Views and Reliable Information of Laredo, address*

## THE LAREDO IMPROVEMENT CO.



# \* LURAY, \* Virginia. \*

2,500 Acres Town Lands,

8,000 Acres Mineral Lands,

Luray Inn and Caverns.

## The Valley Land & Improvement Company,

Capital Stock, \$2,000,000.

Luray, Page County, Va.

### DIRECTORS.

D. F. KAGEY, Luray, Va., President.	G. C. MARSHALL, Uniontown, Pa., Vice-President and General Manager.
T. E. McCORKLE, Lexington, Va.	DR. W. L. HUDSON, Luray, Va.
DR. A. M. HENKEL, Staunton, Va.	G. K. MULLIN, Philadelphia, Pa.
	J. W. MILLER, Mount Jackson, Va.

### EXECUTIVE COMMITTEE.

D. F. KAGEY,	G. C. MARSHALL,	T. E. McCORKLE,	G. K. MULLIN.
Secretary, T. E. McCORKLE.	Treasurer, H. M. KERR, Kagey & Co.'s Bank.	Attorney, T. E. McCORKLE.	
Associate Counsel, H. J. SMOOT,	Manager of Inn and Caverns, G. K. MULLIN.		
Bankers, D. F. KAGEY & CO., Luray, Va.			

### CHARTER, PROPERTIES, &c.

The Valley Land & Improvement Company has been organized under the most liberal charter ever granted by the State of Virginia.

2,500 acres for manufacturing purposes and building sites. These lands are in and around the hotel, caverns and town of Luray on an undulating plateau, protected on either side by the Massanutten Mountain and the Blue Ridge Mountains.

8,000 acres of the best mineral properties in Virginia, consisting of iron, manganese and other valuable minerals which have stood the test of examination by the ablest geologists of the country.

The company owns the celebrated Luray Inn and the Luray Caverns.

Page County stands at the head of the list as having a greater variety of minerals and richer than any other county so far as known in the State.

In addition we have the finest kind and a great variety of virgin timber and fire-clays, slates, beautiful marbles, ochres, umber and mineral paints.

### LOCATION, RAILROADS, &c.

Luray, now a town of about 2,500, is the county seat of Page county, has five churches, splendid schools, fine stores, three newspapers, flouring mill, cigar factory, &c.

The town is on the Shenandoah Valley Railroad, of the Norfolk & Western system, and is the best location in Virginia, four hours from tidewater.

Two new lines projected connecting closely with Baltimore and Washington and insuring cheap freights.

Luray has largest tannery in the world, annual pay roll over \$350,000.

Inexhaustible water supply, agricultural resources, charming climate.

Fine natural sites for furnaces and manufactories of all kinds fronting the railroad, reserved by the company, which by donations of land and in every possible way will promote Luray's manufacturing interests.

### LOTS, CAPITAL STOCK, &c.

Capital stock \$2,000,000, shares \$100.

One million of stock reserved in treasury for betterment.

One million now offered for sale.

Books open at the bank of D. F. Kagey & Co., Luray, Va.

The company reserves the right to close the books any time before the full amount of the one million is sold.

Twenty per cent. must be paid on subscription, 20 per cent in 30 days, the balance equally in six and twelve months.

When half of the subscription is paid in subscribers have the right to use their stock in payment on lot purchases.

The company feels safe in saying that with the magnificent property in hand, the Inn and Caverns, it will be enabled when thoroughly under way to pay four or five per cent. dividend on the stock sold, independent of lots and mineral lands.

The company already owns an electric plant which will be considerably enlarged.

Complete system of water works and many other improvements projected. Investors are referred to Mr. J. W. Wheeler, Cashier Drivers and Mechanics' National Bank, Baltimore, Md., for full information. H. C. Turnbull, Jr., real estate agent, 52 Lexington street, will receive subscriptions of stock in Baltimore.

The fullest investigation invited.

THE VALLEY LAND & IMPROVEMENT COMPANY, LURAY, PAGE COUNTY, VA.

**REVERSIBLE  
YER'S STEEL & WOOD TRACK  
HAY CARRIERS**

TRADE MARK. A complete outfit. Easy to put up, always reliable and fully warranted to meet the wants of any farmer.

**BEST HAY TOOLS IN THE MARKET.**

**MYERS' FORCE AND LIFT PUMPS**

Simple, durable, powerful, easy to operate never affected by frost. **Patent GLASS VALVE**, will never corrode. Ask your dealer for our goods. Write for catalogue. **F. F. MYERS & BRO. ASHLAND, O.**

**GREATEST IMPROVEMENT OF THE AGE**

**THE NEW SUPERIOR  
Double Acting, Non-Freezing  
FORCE PUMP**

ESPECIALLY ADAPTED FOR  
**DRILLED WELLS.**  
DOUBLE WROUGHT PIPE STOCK  
NON-BREAKABLE.  
LARGE AND STRAIGHT WATER-WAYS.  
STEADY FLOW. EASY WORKING.  
2 1/2 in. Brass Cylinder goes in 3 in. Well.  
3 in. Brass Cylinder goes in 3 1/2 in. Well.  
**PORCELAIN VALVE**  
S.A.T.

Write for descriptive catalogue and circulars. Address  
**THE SUPERIOR MACHINE CO.**  
SPRINGFIELD, OHIO.

**Maslin's Patent Steam Pump.**  
Pat. Feb. 12, & Dec. 3, '89.

Cheapest and Best Automatic Steam Vacuum Pump. Handling DIRTY and GRITTY LIQUIDS without Wear, Oil or Care. Simple, Economical, Efficient & Durable. Pumping Plants for Contractors, Irrigation, Water Works, Railroads, Mining & General Hydraulic Purposes. Write or call for Circulars. **JOHN MASLIN & SON, SOLE MANUFACTURERS, 165-167 1st St., Jersey City, N. J.**

**COMPLETE STEAM PUMP**  
10 SIZES FROM \$7 TO \$75  
FOR WATER SUPPLY TANKS,  
FIRE PUMPS & ETC.  
WRITE FOR  
PRICES AND  
DESCRIPTIVE  
CIRCULARS

**VAN DUZEN & TIFT**  
SOLE MAKERS  
CINCINNATI, O.

If you want the **BEST, MOST EFFICIENT and DURABLE**

## CENTRIFUGAL PUMP

**IN THE MARKET, REMEMBER  
THAT THE  
Original Baldwinsville  
Centrifugal Pumps  
ARE MANUFACTURED ONLY BY  
BOGGS & CLARKE, - SYRACUSE N. Y.**

Write for Catalogue and Prices.

## DEAN BROS' STEAM PUMP WORKS.

**BOILER FEEDER BREWERS AIR PUMP FIRE PUMP DUPLEX PUMP**

**PUMPING MACHINERY FOR ALL PURPOSES.**

**INDIANAPOLIS, IND.**

SEND FOR CATALOGUE AND PRICES.

**BLAKESLEE MFG. CO.**  
DU QUOIN ILL.

**STEAM PUMPS.**

We have just issued a new illustrated catalogue of our Steam & Jet Pumps. A copy will be mailed free on application.

## THE LAIDLAW & DUNN CO.

**STANDARD COMPOUND STEAM PUMP**

**STANDARD DUPLEX STEAM PUMP**

**HERO BOILER FEEDER**

**PUMPS OF EVERY DESCRIPTION.**

**CINCINNATI, O.**

SEND FOR CIRCULAR.

## GEO. F. BLAKE MFG. CO.

BUILDERS OF STEAM AND POWER

**Pumping Machinery**

111 Federal Street, Boston.

95 and 97 Liberty St., N. Y., 535 Arch St., Philadelphia.

**THE BUFFALO STEAM PUMP CO.**  
BUFFALO, N. Y. - MANUFACTURERS OF  
**STEAM PUMPS**  
FOR ALL DUTIES.

**PUMPS**

We manufacture direct acting Duplex and Crank and Fly Wheel Steam Pumps for all services. Brass Founders and manufacturers of Brass and Iron Body goods. Straightway valves, etc. Iron Pipe and Fittings and Mill Supplies. Boiler Feed Pumps a specialty. Address

**THE JOHN H. McCOWAN CO.**  
42, 44, 46 Central Ave., CINCINNATI, O. | Branch House, 1425 E. Main St., RICHMOND, VA.

**HYDRAULIC JACKS.**

BEST IMPROVEMENTS. MOST STYLES.

Hydraulic Presses, Hydraulic Pumps, Valves & Fittings,

Hydraulic Transfer Jacks for Removing Locomotive Drivers and Trucks.

**LEVER PUNCHES and SHEARS.**

**WATSON & STILLMAN**  
204, 206, 208 & 210 E. 43d Street, New York.

**OIL WELL SUPPLY CO., LIMITED**  
82 FULTON ST., NEW YORK.

Also at 91 Water St., Pittsburgh, Pa.

Manufacture and sell every article, tool or appliance needed at

## ARTESIAN WELLS

Either for Oil, Gas or Water.

**BOILERS, ENGINES, TUBING, CORDAGE,  
DRILLING TOOLS.**

**Brass and Iron  
Goods & Supplies.**

For Natural or Artificial Gas.

Price lists on application.



**The Baldwinsville Centrifugal Pump.**  
OLDEST, BEST AND LATEST IMPROVED.

Especially adapted for contractors' use, Pumping Coffin Dams, Sewers, Sand-Pumping, etc. Irrigating Plants a Specialty. Address for catalogue, **IRVIN VAN WIE, 48 & 50 West St., Syracuse, N. Y.**

Established 1861. Removed to Syracuse 1881.

**The Improved Smith & Vaile**

SINGLE, DUPLEX AND COMPOUND

**Steam Pumps**

FOR EVERY DUTY.

**Water-Works Machinery.**

**The SMITH & VAILE CO.**  
DAYTON, OHIO, and NEW YORK,  
119 LIBERTY STREET.

EASTERN AND SOUTHERN AGENTS:

THOS. K. CAREY & BROS., 26 Light Street, - - BALTIMORE, MD.  
G. W. STORER, 149 North Third Street, - - PHILADELPHIA, PA.  
D. A. TOMPKINS CO., - - CHARLOTTE, N. C. and ATLANTA, GA.





ARTESIAN WELL PUMPS.

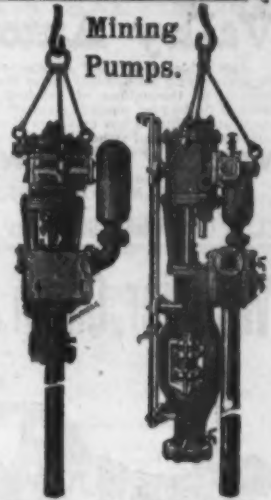
PUMPS FOR  
BOILER-FEEDING,  
MINES,  
REFINERIES,  
BREWERIES,  
TANNERIES,  
IRRIGATING,  
FIRE PURPOSES,  
RAILROADS and  
FILLING TANKS,  
CRANK and  
FLY WHEEL  
And VACUUM

PUMPS.



SEND FOR  
Illustrated Catalogue A.

SIMPLE,  
COMPACT,  
DURABLE,  
EFFICIENT.  
ADAPTED TO  
ALL PURPOSES.  
NO OUTSIDE  
VALVE GEAR.



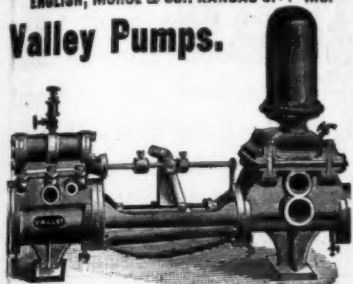
Mining  
Pumps.

Piston Pattern.

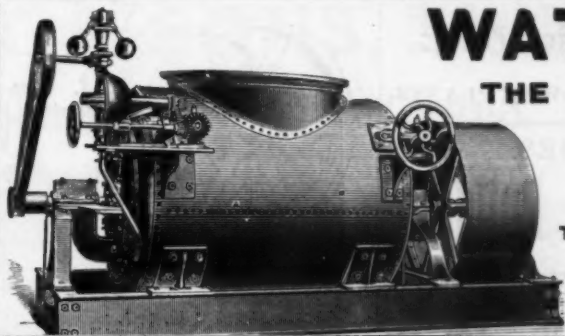
Plunger Pattern.

The A. S. Cameron Steam Pump Works,  
Foot of East 23d Street,  
NEW YORK.

ENGLISH, MORSE & CO., KANSAS CITY MO.  
Valley Pumps.



Valley Pump Co., Easthampton, Mass.



## WATER WHEELS.

THE JAMES LEFFEL TURBINE

On Horizontal Shaft.

More than 30 varieties of this style built by

THE JAMES LEFFEL & CO.

SPRINGFIELD, OHIO, and 110 Liberty Street, N. Y. City.

Send for our Fine Pamphlet and other Information.

DUPLEX STEAM PUMPS.  
 POWER PUMPS.  
 PRESSURE PUMPS.  
 INDEPENDENT CONDENSING APPARATUS.  
**BARR PUMPING ENGINE CO.**  
 GERMANTOWN JUNCTION,  
 PHILADELPHIA,  
 PENNA.

**THE ECLIPSE PUMP MFG CO.**  
 RAILWAY WATER STATION OUTFIT  
 EXCELSIOR DIRECT ACTING STEAM PUMP  
 GENUINE DUPLEX STEAM PUMP  
 ECLIPSE FEEDER  
 PUMPS OF EVERY DESCRIPTION.  
 CINCINNATI, O.  
 SEND FOR CIRCULAR.

SILVER & DEMING MFG CO.  
 MANUFACTURERS OF  
**PUMPS**  
 FOR  
 POWER HAND & WINDMILL USE.  
 ARTESIAN WELL PUMPS & CYLINDERS & SPECIALTY  
 SALEM, OHIO.

**OHATTANOOGA FOUNDRY & PIPE WORKS.**  
 DAVID GILLES, Pres. C. B. INESTER, Vice-Pres. M. LLEWELLYN, Secy. and Treas.  
 Successors to B. GILLES & CO., Chattanooga, Tenn., Manufacturers of



## SPIRAL WELD STEEL PRESSURE PIPES.



HAMMER WELDED.

FLANGE STANDARD.

COPYRIGHTS FOR ALL USES.

Practical for Water, Gas, Steam or Air, under Light or Heavy Pressures.  
 STRONGER, LIGHTER, CHEAPER than any other Pressure Tubes manufactured.  
 THE SPIRAL WELD TUBE CO., 43 John Street, New York.

H. E. McWANE, President and General Manager. W. D. CAMPBELL, Secretary and Treasurer.

THE CLAMORGAN COMPANY, Proprietors of

## HILL CITY PIPE WORKS



S. E. NOBLE, Pres.

JOHN E. WARE, Sec. and Treas.

R. F. CARTER, Supt.

THE

## ANNISTON PIPE WORKS

ANNISTON, ALA.

MANUFACTURERS OF



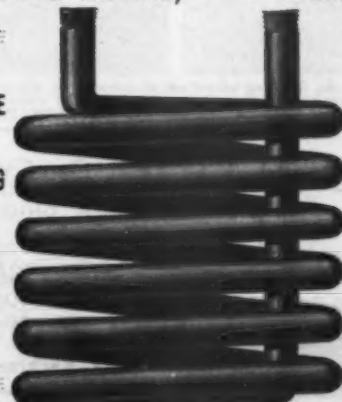
Special Castings, General Castings and Machine Work.

## JAMES D. CARDELL & CO.

PIPE BENDING WORKS,

Philadelphia, Pa.

Coils of  
 WROUGHT IRON PIPE  
 for  
 ICE and REFRIGERATING  
 MACHINES,  
 CHEMICAL WORKS,  
 SOAP WORKS,  
 BLAST FURNACES.



Coils of  
 Any Desired Length  
 of  
 WELDED PIPE.  
 PIPE BENDING  
 and  
 WELDING A SPECIALTY

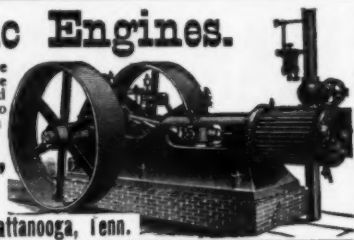
Advertise in the MANUFACTURERS' RECORD.

## Valley Automatic Engines.

Applicable to any and all uses requiring Close Regulation and Economical use of Steam. They are constructed throughout of selected material and finished in the best possible manner. Guaranteed to equal any of their class extant in Economy, Regulation, Durability and General Efficiency.

**VALLEY IRON WORKS,**  
MANUFACTURERS,  
WILLIAMSPORT, PENNA.

CASEY BOILER MFG. CO., Sales Agents, Chattanooga, Tenn.



## Webster, Camp & Lane Machine Company,

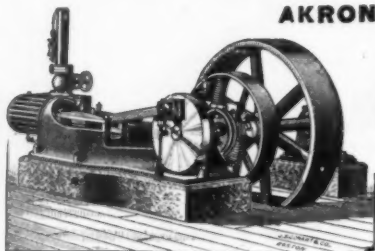
AKRON, OHIO.

BUILDERS OF

**AUTOMATIC ENGINES,**

— BOILERS, —

Friction Clutch Pulleys,



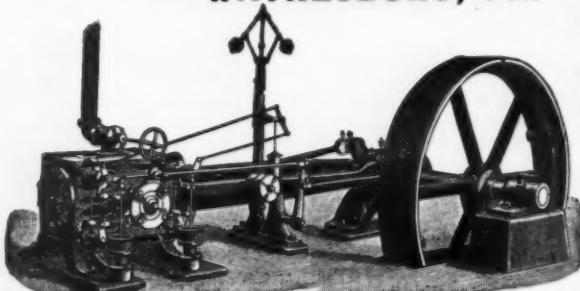
Write for Circulars.

COMPLETE POWER PLANTS.

ECLIPSE CORLISS ENGINES.

## Frick Company, Engineers, Builders,

— WAYNESBORO, PA. —



40 to 1,000 H. P.  
Made.

Condensing, Non-Condensing & Compound  
Send for Circular.

Ice-Making and Refrigerating Machinery  
Send or Ice-Machine Circular.

Special Automatic Electric Light Engines, Steam Boilers, Traction and Portable Engines, Saw Mills. Send for our General Catalogue

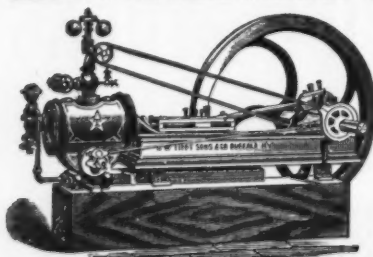
## FOR THE LOWEST-PRICED FIRST-CLASS (—) ENGINES & BOILERS

ADDRESS

**GEO. W. TIFFT, SONS & CO.**  
BUFFALO, N. Y.

5 to 500 H. P. Special Stock Sizes & to 50 H. P., both Stationary and Semi-Portable.

A few good Second-Hand Engines and Boilers for sale at an astonishingly low figure. Must be sold to make room for stock. Correspondence solicited. Mention this paper.



## BECK AUTOMATIC ENGINE.

For Electric Light, Flour, Cotton, Woolen and Rolling Mill Service and all other purposes requiring power. Economical in Steam Consumption. Does not race. Speed constant under varying loads and pressure of steam. Simple.

Sturdy in construction. Requires no more space than double disc engines. Compact.



taken for complete steam plants, including boilers and all connections, masonry and erection. All work guaranteed. Send for catalogue and full particulars. Also builders of Portable, Vertical and Stationary Engines, Boilers of all styles, and Saw Mills. Address **TAYLOR MFG. CO., Chambersburg, Pa.**

## ALEX. K. RARIG & CO.

COLUMBUS OHIO.

MANUFACTURERS OF

Blast Furnace Plants,

AUTOMATIC CUT-OFF ENGINES,

HOISTING ENGINES,

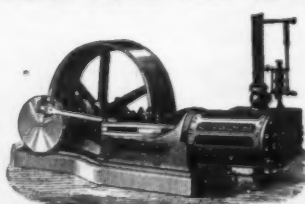
Boilers, Boiler Plate Punches,

ROLLS AND SHEARS.

Clay-Working Machinery,

Steam Sewer Pipe Presses.

Socket Pipe, Tile and Fire-Proof Dies, Wet and Dry Pans for Grinding and Tempering Clay for Sewer Pipe, Terra Cotta, Brick and Tile. We furnish complete outfits for Sewer Pipe and Brick Plants. Write for catalogue. Correspondence solicited. Mention this paper.

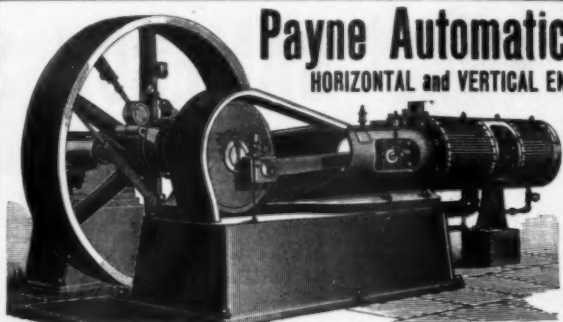


## Payne Automatic Engines

HORIZONTAL and VERTICAL ENGINES and BOILERS.

Especially adapted to Electrical Purposes. Also COMPOUND and TRIPLE COMPOUND ENGINES  
**B. W. PAYNE & SONS,**  
Manufacturers,  
Elmira, N. Y.

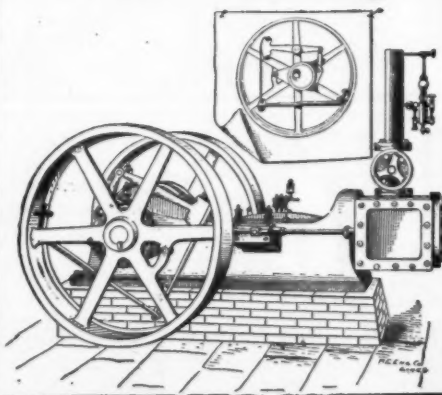
N. Y. Office, 45 Dey St.  
26 W. Randolph St., Chicago;  
H. P. Gregory & Co., San Francisco, Cal.



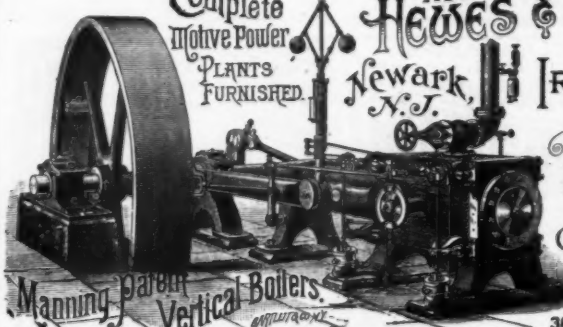
## Porter Manfg. Co., Limited.

SYRACUSE, N. Y.

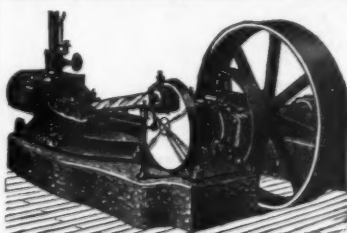
Builders of Automatic and Plain Slide Valve Engines, Portable and Stationary Boilers, Stand Pipes for Water Works. Only Manufacturers of the NEW ECONOMIZER PORTABLE BOILER.



Complete Motive Power PLANTS FURNISHED.  
**The HEWES & PHILLIPS**  
Newark, N. J. IRON WORKS



Improved CORLISS ENGINES. High Pressure. Condensing and Compound. TUBULAR BOILERS. HEAVY FLY WHEELS A SPECIALTY. IN SIZES UP TO 36 FT. DIA. BY 10 FT. FACE.



## Russell & Co.

MASSILLON, OHIO.

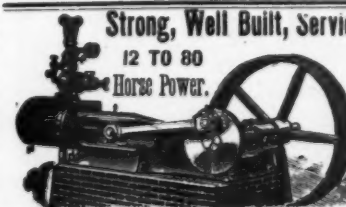
BUILDERS OF

**Automatic Engines,**  
BOILERS, ETC.

Complete Power Plants Furnished.

SOUTHERN AGENCY:

RUSSELL & CO., 75 S. Forsythe St., Atlanta, Ga.



Strong, Well Built, Serviceable

12 TO 80

Horse Power.

## STEAM ENGINES

Adapted to Heavy, Continuous Work. Every Engine tested under full load. For descriptive circulars, address

Chandler & Taylor, Indianapolis, Ind.

**CLEVELAND AND HARDWICK**  
**ERIE ENGINE WORKS**  
MANUFACTURERS OF STEAM ENGINES AND BOILERS.  
ERIE, PENN.

ESTABLISHED 1864. INCORPORATED 1883.

**WM. A. HARRIS STEAM ENGINE CO.**

(Successors to Wm. A. Harris.)

PROVIDENCE, R. I.

Builders of HARRIS-CORLISS ENGINES,

FROM 20 TO 2,000 HORSE POWER.

These Engines are carefully built of best materials and in different forms, such as Non-Condensing, Condensing and Compound Condensing. Send for copy of ENGINEERS AND STEAM WORKS' MANUAL, by J. W. Hill, M. E. \$1.25. Mention this paper and send for catalogue. WM. A. HARRIS, Pres. & Trust.

The D. A. TOMPKINS CO., CHARLOTTE, N. C., Southern Agents.

## THE BIRDSALL COMPANY.

— OF AUBURN, N. Y. —

Stationary, Automatic, Portable and Traction Engines, Return, Tubular, Locomotive and Steam Heating Boilers, Radiators, Portable Saw and Grist Mills, Shingle Machines, Threshers, Fruit Evaporators, etc., etc. Branch House, 203 North Street, Moon Building, Baltimore, Md.  
**FRED. I. MOSKOW, Manager.**



336, 338, 340, 342  
NORTH ST.**The WARFIELD MANUFACTURING CO. BALTIMORE, MD.**

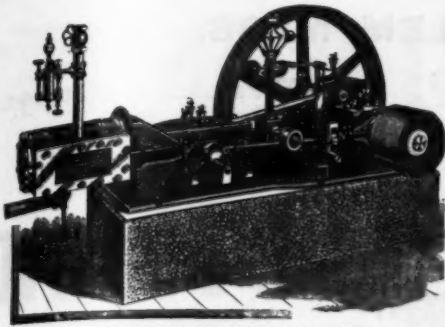
COMPLETE PLANTS FOR THE

**Generation and Transmission**

— OF —

**STEAM POWER.**

GENERAL MACHINE WORK.

Machinery Designed and Constructed for  
Special Purposes.

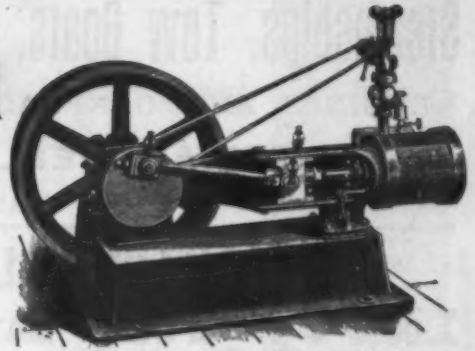
THE WARFIELD-PILLINGS AUTOMATIC ENGINE.

Class A.—The Warfield-Pillings Automatic Engine. A high-grade Engine, (for high or medium speed,) for electric light and other purposes.

Class B.—The Warfield Throttling Governor Engine—Horizontal and Vertical.

OUR MACHINERY IS CLASSED AND CATALOGUED AS FOLLOWS:

Class C.—Steam Boilers—Stationary Tubular, Upright Tubular.  
Class D.—Shafting, Hangers, Pulleys, Couplings, &c.  
Class E.—Fruit, Vegetable and Oyster Packers' Machinery—most complete line on the market.



THROTTLING GOVERNOR ENGINE, HORIZONTAL.

Class F.—Can-Making and Sheet-Metal Machinery.  
Class G.—The Warfield-Pillings Patent Water Motor, Ceiling, Column and Exhaust Fans, complete Ventilating Apparatus, Patent Electric Motors.

Any of the above Catalogues mailed upon application.

**TALBOTT & SONS, RICHMOND, VA.**

MANUFACTURERS OF

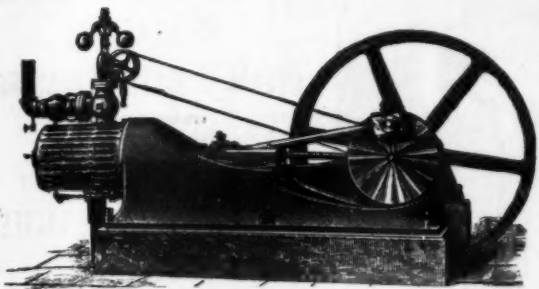
**Engines and Boilers,**

SAW, CORN AND WHEAT MILLS,

ROPE FEED for SAW MILLS, TIMBER GUAGES, graduated by 1-16 of an inch. Shafting, Hangers and Pulleys,

**Cotton-Seed Oil Mill Machinery,**

MODERN COTTON GINNERIES.



BRANCH OFFICES:

MACON, GA.

CHARLOTTE, N. C.

ESTIMATES AND CONTRACTS MADE FOR COMPLETE OUTFITS,  
Embracing the Latest and Best Improvement.**ENGINES AND BOILERS**

FROM 2 TO 400 HORSE-POWER.



The strongest, most compact and best built outfits on the market.

Wood-working and Iron-working Machines a Specialty.

Send for Catalogue B.

**THE GLOBE MACHINE CO.**

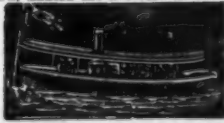
35 Broadway, New York.

Why not subscribe for the MANUFACTURERS' RECORD? Price \$4 per year or six months for \$2.

**"THE KRIEBEL" NEW MODEL STEAM ENGINES.**

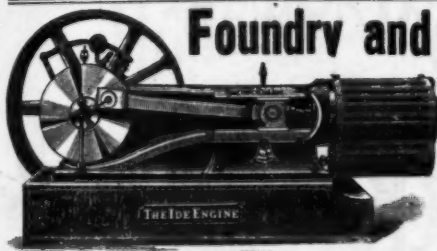
Single and Double Cylinder STATIONARY, SEMI-PORTABLE, MARINE and HOISTING ENGINES. STEEL BOILERS of all styles and sizes. AUTOMATIC and HORIZONTAL THROTTLING ENGINES. GOVERNORS, INJECTORS, STEAM PUMPS, ETC.

Send for Catalogue, stating what you wish prices on.  
RICE & WHITACRE MFG. CO.  
47 & 49 S. Canal Street, CHICAGO, ILL.

**Foundry and Machine Dept.**

Harrisburg Car Manufacturing Co.  
HARRISBURG, PA.

Manufacturers of the Ide Automatic Engine, Compound and Standard patterns. Also builders of boilers and complete power plants. New York Office, Messrs. Fleming & Kimball, 17 Day street. New England Office, Messrs. John Post, Jr. & Co., 70 Kilby street, Boston. Baltimore Office, Messrs. Thomas K. Carey & Bro., 66 Light street, Baltimore.

**SKINNER ENGINE CO., ERIE, PA.**

OVER 3400 IN USE.

Manufacturers of PORTABLE and STATIONARY  
**ENGINES and BOILERS**

SEND FOR CATALOGUE.

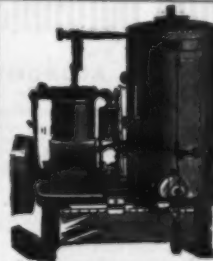
MORTON, REED & CO., Agts., Baltimore, Md.  
NEW YORK and NEW ENGLAND OFFICE:  
C. B. VINCENT & CO., 15 Cortlandt St., N. Y.

**Valk & Murdoch Iron Works**

CHARLESTON, S. C.

**Engines and Boilers****MACHINERY**

— FOR —

**Complete Fertilizer Works, Rice Mills, &c.****Acme Automatic Engine,**  
With BRYANT'S Patent Safety Boiler.

Sizes 1, 2 and 4 H. P. Fuel, Kerosene (Coal) Oil, 120° to 130° F. test. No dust, ash, or smoke. No Skilled Engineer required. "Break" Tests show that 34 gal. fuel will deliver a full H. P. on bolt for 24 hours, in the case of our 2 H. P. Engine and Boiler.

Rochester Machine Tool Works,  
BUILDERS, ROCHESTER, N. Y.

SEND FOR CATALOGUE.

**W. R. BURGESS, Southern Representative.****IMPROVED WHELOCK ENGINE.****COMPLETE STEAM POWER PLANTS**

For Cotton Mills, Electric-Light Plants and All Purposes Where Durability and Economy of Steam is Important.

The Wheelock Engine has many advantages not possible to any other engine. Heating and Ventilation of Cotton Mills, Drying Lumber, Brick, Pottery, &c., by the Star-vent System. Everything for Saw Mills, Planing Mills, Brick-Making, &c.

Correspondence solicited.

**GREENSBORO, N. C.****St. Louis Iron & Machine Works,**

Capital Stock, - - - \$200,000 Paid Up.

**ST. LOUIS, MO.**

Established 1854.

MANUFACTURERS OF

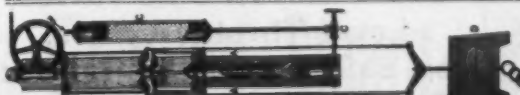
Incorporated 1875.

**Corliss, Steamboat and Slide Valve Engines,**

COTTON COMPRESSES, PLATE GLASS MACHINERY,

HOISTING TRAVELERS,

Mining Machinery, Dry Clay Brick Machinery, &amp;c.



Without any question the  
Greatest  
**FUEL SAVER**  
of any Regulator.

**Hallock Damper Regulator.**

UPWARDS OF 2,000 NOW IN USE.

Keeps a steady pressure of steam. Saves fuel and gives regularity of power. Simple in construction. It does not get out of order. Uses no water. Requires no tank. Will outlive any boiler. Every machine warranted.

AUSTIN ADAMS, Sole Agent, 40 Day Street, New York.  
Regulator can be taken apart, cleaned and put together in five minutes.

**THE LOCKWOOD MANUFACTURING CO.**  
BUILDERS OF  
**Steamships, Tow Boats, Steam Yachts,**  
ENGINES AND GENERAL MACHINERY.  
**ARTESIAN WELL TOOLS.**

Send for Estimates.

EAST BOSTON, MASS.

**THE ASHTON VALVE CO.'S**  
**Lock-Up "POP" Safety Valves,**  
FOR STATIONARY, MARINE, LOCOMOTIVE AND HOISTING ENGINE BOILERS.  
Instant and perfect relief given. Non-corrosive and always reliable. Also,  
—WATER RELIEF VALVES FOR STEAM PUMPS AND STANDPIPES.—

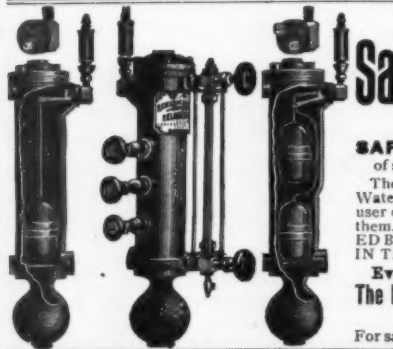
271 Franklin St., BOSTON, MASS. New York Office, 107 Liberty St. Branch Office, 218 Lake St., CHICAGO.



**THE CELEBRATED**  
**UNION INJECTOR.**  
Only One Lever to Operate.  
**The Eagle Ejector.**  
The Best Jet Pump Made.

Felthousen's Cylinder Oil Pumps; Improved Gauge Cocks; Adjustable Spring Flue Scraper; Improved Ratchet Drills; Combination Pipe and Nut Wrench; Compression Grease Cups.  
**Buffalo Glass Oil Cups & Lubricators**  
Pop Valves; Steam and Water Gauges; Single Bell and Chime Steam Whistles; Piston and Valve Rod Packing; Supplies all kinds for Engines and Boilers.

**SHERWOOD MFG. CO.**  
Sole Manufacturers. BUFFALO, N. Y.



**THE RELIANCE**  
**Safety Water Columns**

OVER 15,000 IN USE.

**SAFETY** of Life and Property. **ECONOMY** of steam, of fuel, of repairs, of wear on the boiler.  
The Most Elegant and Most Economical Water Columns ever placed on boilers. No steam user or engineer can afford to operate boilers without them. This is the reason why they have been ADOPTED BY MANY OF THE LARGEST STEAM USERS IN THE WORLD.

Every Column Warranted. Send for price list.  
**The RELIANCE GAUGE CO.,** Sole Manufacturers,  
Argyle Building, Cleveland, O.  
For sale by all Dealers. For sale by all Boiler Makers.

**LUDLOW VALVE MFG. CO.**

Office and Works: 938 to 954 River St., and 67 to 83 Vail Ave., Troy, N. Y.

**VALVES**

Double and Single Gate, 1/4 inch to 48 inch; outside and inside Sewers, Indicators, etc., for Gas, Water, Steam, Oil.  
SEND FOR CIRCULAR.



Also Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves.

**The LUNKENHEIMER BRASS MFG. CO.**  
CINCINNATI, OHIO, U. S. A.

This Cut Changes Weekly. Send for July, 1890, Catalogue, containing complete description of

Heavy Regrinding **GLOBE VALVES**,  
Check Valves, Gate Valves,  
Lever Throttle Valves,  
Pop Safety Valves, Improved  
Glass Oil Cups, Automatic  
Sight Feed Lubricators,  
Grease Cups, &c.



Slide Top Glass Oil Cup.

For Sale by All Leading Jobbers throughout the United States.

**LOCKE BROTHERS,**

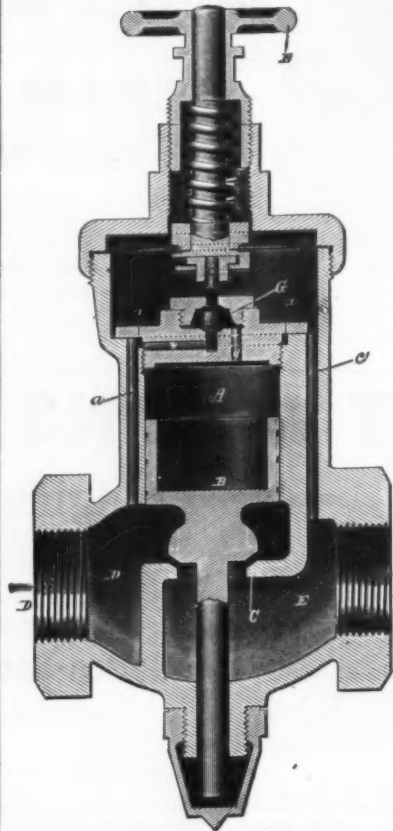
\* SALEM, MASS. \*

Franklin Street,

Patentees and Manufacturers

OF

**STEAM**  
**APPLIANCES.**



THE LOCKE REDUCING VALVE.

**SUPERIOR STEAM DAMPER**  
**REGULATORS,**  
**STEAM & WATER PRESSURE**  
**REGULATORS,**  
**STEAM TRAPS,**  
**Improved GLOBE VALVES,**  
**CHECK VALVES,**  
**REDUCING VALVES,**  
**BACK PRESSURE VALVES.**

**SATISFACTION GUARANTEED.**

Send for Circulars.

**Wm. Baragwanath & Son**  
**FEED WATER**  
**HEATING**  
**PURIFYING APPARATUS**

48-50 & 52  
W. Division St.  
—CHICAGO—  
...ILL...



# Stilwell's Patent Lime Extracting HEATER AND FILTER Combined.

The Only Lime Extracting Heater That Will Prevent Scale in Steam Boilers.

Removing all impurities from the water before it enters the boiler.

Thoroughly Tested. Over 3,000 of Them in Daily Use.

This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary lime water, when the door was removed after the Heater had been running two weeks. Illustrated Catalogue Free.

## STILWELL & BIERCE MFG. CO., DAYTON, O.



### The Tudor Boiler Manufacturing Co. Steam Boiler and Tank Makers

OFFICE, 242 E. Pearl St. (opp. Pittab'g, Cincinnati & St. Louis Ry.), CINCINNATI, O.  
SECOND-HAND BOILERS ALWAYS ON HAND.



ESTABLISHED  
1877.

Fulton Boiler Works  
RICHMOND, IND.  
J. T. Caulfield,  
Proprietor.



### The Zell Improved Boiler

Most Economical Steam Generators on the market.

RESULTS GUARANTEED.

CAMPBELL & ZELL CO.

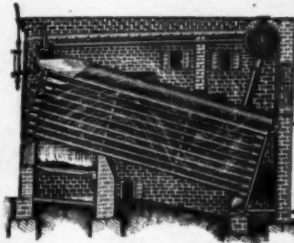
IRON FOUNDERS,

Manufacturers and Engineers,

ESSEX and BURKE STS.

BALTIMORE, MD.

New York Office, 15 Cortlandt Street.  
Phila. Office, Room 918, Drexel Bldg. Send for circulars.



### ARMSTRONG BROS.

MANUFACTURERS OF

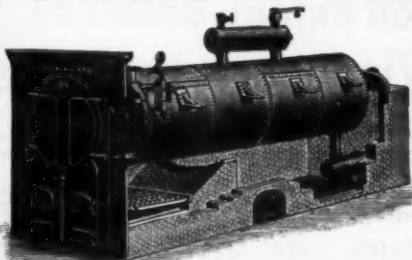
### Engines and Boilers

ALL SIZES AND KINDS.

Output Last Year 1473 Engines and Boilers.

Have large stock New Standard Boilers, and also large stock Second-hand Engines and Boilers, all sizes and kinds. Will dispose of at a bargain. For Circulars address

ARMSTRONG BROS., SPRINGFIELD, OHIO.



### JARVIS Patent FURNACE

For Setting Steam Boilers.

Economy of Fuel, with increased capacity of Steam Power. Like the Siemens Process of Making Steel, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, &c. Send for Circulars.



JARVIS ENGINEERING CO.

J. N. PRATT, Treas. and Gen'l Manager.  
61 Oliver Street, BOSTON, MASS.

#### SOUTHERN REFERENCES:

Eagle & Phenix Mfg. Company, Columbus, Ga.  
Anniston Mfg. Co., Anniston, Ala.  
P. King Mfg. Co., Augusta, Ga.  
Rose Mining Co., Charleston S. C.  
Maryland Pavement Co., Baltimore, Md.  
Brush Electric Light Co., Baltimore, Md.  
Ettrick, Matoca and Battersea Mfg. Co's., Petersburg, Va.  
Kasin Fertilizing Co., Baltimore, Md.  
Tanner & Delaney Engine Co., Richmond Va.  
Shirley Mills, Augusta, Ga.  
Graniteville Mfg. Co., Graniteville, S. C.  
Charleston Bagging Co., Charleston, S. C.  
P. H. Mayo & Bros., Richmond, Va.  
Phosphate Mining Co., Beaufort, S. C.  
Brush Swan Electric Light Co., Norfolk, Va.  
Columbus Ice & Refrigerator Co., Columbus, Ga.  
Lenoir Manufacturing Co., Lenoir, East Tennessee.  
Vanceville Mill, Graniteville, S. C.  
Charleston Electric Light Co., Charleston, S. C.

SEND FOR THIS BOOK  
FREE ON APPLICATION.

**BABCOCK & WILCOX CO.**  
107 HOPE ST.  
GLASGOW, SCOTLAND.

30 CORTLANDT ST. N.Y.

BRANCH OFFICES:  
CHICAGO, ILL.  
PHILADELPHIA, PA.  
PITTSBURGH, PA.  
ST. LOUIS, MO.  
ST. PAUL, MINN.  
WHEELING, W. VA.

MANUFACTURERS IN UNITED STATES, SCOTLAND, FRANCE, GERMANY & AUSTRIA.

AWARDED THE GRAND PRIZE AT LATE PARIS EXPOSITION.



### THE CURTIS BALANCED STEAM TRAP.

MANUFACTURED BY

THE CURTIS REGULATOR CO.

180 Beverly St., Boston, Mass.

HAS balanced Valve, therefore works equally well under HIGH or LOW pressure; discharges full area of pipe; has hard composition float, vented to the atmosphere, and is warranted not to collapse or fill.

#### GENERAL AGENCIES.

NEW YORK, 100 Liberty st.  
PHILADELPHIA, 2035 North Front st.  
MINNEAPOLIS, 210 South Third st.  
CHICAGO, 218 Lake st.



THE HOPPES MFG. CO., Springfield, Ohio, U. S. A.

### Hoppes Exhaust Steam Feed Water Heater.

This Heater has many superior points of merit over all other heaters on the market, among which is the Automatic Feed-Water Regulator, which prevents the nuisance of overflow, so common in other open heaters; and its Oil Catcher, which thoroughly separates the oil from the exhaust steam, and prevents its mixing with the feed-water. The construction of this Heater insures the heating of the water to boiling point, and the retention of all solids that will separate at the heat of exhaust steam. Illustrated catalogue sent on application.

# Black Diamond Roofing

COMMENCING ITS SEVENTH YEAR IN USE.

## FOR ANY ROOF AND ANY CLIMATE.

Cheap and Durable. Especially Adapted for Southern Climate. More Durable than Metal and Costs Much Less.

WIND-PROOF. WATER-PROOF. FIRE-PROOF. ACID-PROOF.

Applied by anybody. Send for samples and prices.

**EHRET-WARREN MFG. CO.,** SOLE MANUFACTURERS, St. Louis, Mo.

16 West Missouri Ave., Kansas City, Mo.



ALSO MANUFACTURERS OF  
Building and Sheathing Papers.

**WEBSTER MFG. CO.,**

Successors to WEBSTER & COMSTOCK MFG. CO.

MANUFACTURERS OF  
MACDONALD FRICTION CLUTCHES,  
Shafting, Pulleys, Etc.

FOUNDERS AND GENERAL MACHINISTS.

Office and Salesroom, 195 S. Canal St.  
Works, 1075-1096 West 15th St.

Chicago, Ill.

DEALERS IN  
COTTON, RUBBER and LEATHER  
**BELTING.**



New Improved Conveyor Coupling, so arranged that by taking out bolt any desired section may be removed.



"HERCULES" Steel Scoop.



**SPIRAL STEEL CONVEYOR.**

SOLID & INSERTED SAWS.  
PLANER KNIVES AND BITS.  
EMERY WHEELS. FILES.  
SAW CUMMERS. SWAGES.  
MANDRELS.  
LEATHER AND RUBBER  
BELTING.

**CHATTANOOGA SAW WORKS.**  
MANUFACTURERS AND DEALERS IN  
**SAWS AND SAW MILL SUPPLIES**  
EVERY SAW FULLY GUARANTEED.  
WE MAKE A SPECIALTY OF REPAIRING ALL KINDS OF SAWS  
CHATTANOOGA, TENNESSEE.

PLANERS and MATCHERS.  
SHINGLE MACHINES.  
LATH MACHINES.  
AUTOMATIC ENGINES.  
CANG EDCERS.  
SHAFTING, PULLEYS AND  
HANCERS. BRAD, ENG CO.



Send for new No. 14 catalogue 15-25 Orid street, Seneca Falls, N. Y., and 60 Barclay st., New York. GENERAL AGENCIES:  
Goulds, Caldwell county, Chicago, Ill.; N. O. Nelson Mfg. Co., St. Louis, Mo.

**THE PATENT ROLLER GRATE.**

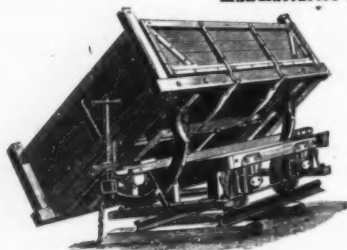


NEW ENGLAND ROLLER GRATE CO., 65 Federal Street, Boston.

The only "Shaking" Grate with Roller Bearings upon which the grate bars rest. The result is a simple, positive, easy and reliable movement that will not get out of order. Grate bars reversible, and all parts interchangeable. Put in boiler as easily and quickly as stationary bars, without bolts, nuts, screws or change of fire-box, & satisfaction guaranteed. AGENTS WANTED.

**The Corey Car & Mfg. Co.**

Manufacturers of Every Description of



**Dumping and Mining Cars**  
IN WOOD, IRON AND STEEL.

PORTABLE TRACK and SWITCHES,

301 & 303 Phenix Building,

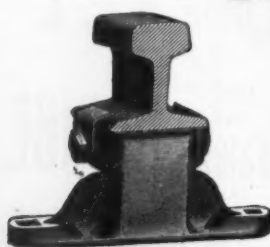
CHICAGO, ILL.

**R. T. WHITE,** 12 Pearl Street,  
BOSTON, MASS. ROOM 6,

Improved Patented Material  
FOR  
Street Railway Roadbeds.

BEST MATERIAL. LOWEST PRICES.  
CORRESPONDENCE SOLICITED.

**THOMAS ASHBURNER,** Western Agent,  
KANSAS CITY, MO.



DAISY CHAIR.

Patented January 26th, 1890.

Sample Chair and Section of Rail sent (express prepaid) to prospective purchasers. Made of cast iron or cast steel mixture and for any form of rail having a T rail form of base.

**FOR MINING MACHINERY,  
HOISTING ENGINES,  
AIR COMPRESSORS,**  
All Superior in Design and Efficiency.

Write to  
**MORRIS COUNTY  
MACHINE COMPANY,  
DOVER,  
N. J.**

**THE PITTSBURGH BRIDGE COMPANY,**  
Iron Bridges, Viaducts and Buildings

R. MERYDITH, Agent at Chattanooga, Tenn.

**POTOMAC BRIDGE WORKS,**

FREDERICK CITY, MD.

BRIDGE ENGINEER and CONTRACTOR.

Iron and Steel Bridges, Roofs, Buildings, Masonry and Pile Foundations. Contracts taken for Substructure and Superstructure Entire.

**LEWIS J. MILLER, WILL W. BIERCE,**  
Philadelphia, Pa. **MILLER & BIERCE,** Memphis, Tenn.  
**Engineers and Contractors**



**Lewis Miller's Improved Steam and Hydraulic Cotton Compressor,**  
(Lewis Miller's and John F. Taylor's Patents.)

The most powerful, economical, and the fastest working Compressor built. The only Compressor in the world that will load cars and vessels to their full tonnage.

Also Agents and Manufacturers of Steam Engines, Water Engines, Pumps, Boilers, and Heavy Machinery in General.

OFFICES:

PHILADELPHIA, PA., (ROOMS 707 & 710 GIRARD BLDG.) MEMPHIS, TENN., ROOM 15, CORNER EXCHANGE



# Southern Railroads.

## Justice at Last.

The United States District Court, in session at Charleston, S. C., June 25th, ordered that the Boston Trust Co. deliver to the Massachusetts & Southern Construction Co. certain bonds given by counties in South Carolina in aid of the construction of the Charleston, Cincinnati & Chicago Railroad. Last spring a staff correspondent of the MANUFACTURERS' RECORD made a thorough investigation of the question in dispute, which the court has just decided, and ascertained that the counties which refused to carry out their part of the contract had neither law nor equity on their side. On the contrary, that they, having received all the advantages they bargained for, were resorting to legal quibbles, of which a New York Tomb's lawyer would be ashamed, to escape from paying their just and voluntarily incurred obligations. He found also that the majority of the reputable citizens of the delinquent counties were ashamed of the course pursued by their officials.

The decree of the court by Judge Simonton, and concurred in by Judge Bond, concluded in these terms:

The question is as to the form of a decree. The bonds are to be delivered to complainant when the road has been completed through the township, and when the agent of the defendant certifies to the fact on the engineer's certificate. The latter is on record. The defendant's agent refuses to endorse it. The fact remains, however, that the road has been completed through the township. The certificate providing for the delivery of the bonds was for the mutual convenience of the parties.

The court cannot permit that which was intended for mutual convenience to be used by one of the parties as an unreasonable obstruction. The act of the chairman in endorsing the certificate would be an act binding his principal as to the fact of the completion of the road. For this purpose only would it be desirable. The principal being in court, the decree can bind it as effectually to the admission of this fact as his certificate would. It is ordered that the Boston Trust Co. deliver to complainant the bonds properly certified.

Although framed in this calm judicial language, this decree contains the following rebuke: "The court cannot permit that which was intended for mutual convenience to be used by one of the parties as an unreasonable obstruction." This fittingly defines the position of the men who influenced the county commissioners to pursue a course that cast discredit upon their constituents and an unjust stigma upon the financial integrity of their State.

The people of the counties involved in this transaction will now be compelled to pay in a lump several years' interest upon these bonds, besides whatever the expenses that have been incurred, and they will have to endure the chagrin of feeling that they have been put in a false position by their public servants, and have been burdened unjustly with the reputation of trying to evade paying their honest debts.

## Southern Railroad Building.

A very striking illustration of the progress of the South is given in the railroad building activity during the first six months of 1890, as compared with the rest of the country. The MANUFACTURERS' RECORD has repeatedly referred to the increasing percentage of new railroad mileage in the South as against the West and North, and statistics compiled by the Railroad Gazette show that 586 of the new mileage for the first half of the year was in the South.

The new track laid, divided by States, is as follows:

Alabama.....	78.5	Missouri.....	34.
Arizona Ter.....	3.3	Montana.....	124.8
Arkansas.....	49.	Nebraska.....	79.
California.....	1.	New Jersey.....	36.
Colorado.....	26.	New York.....	43.
Florida.....	91.8	North Carolina.....	164.4
Georgia.....	183.	Ohio.....	7.
Illinois.....	71.	Pennsylvania.....	65.7
Indiana Ter.....	55.4	South Carolina.....	102.
Kansas.....	57.3	South Dakota.....	1.5
Kentucky.....	74.	Tennessee.....	149.5
Louisiana.....	10.	Texas.....	44.
Maine.....	12.	Utah Ter.....	2.
Maryland.....	30.	Virginia.....	102.
Massachusetts.....	1.5	Washington.....	106.5
Michigan.....	44.1	Wisconsin.....	16.
Minnesota.....	2.		
Mississippi.....	45.	Total, U. S.....	1,898.6

Of this total of 1,898 miles the South built 1,114 miles. Georgia led the whole country with 183 miles, and North Carolina came second with 164 miles, and Tennessee third with 149 miles. Looking at the Western and Northwestern States the contrast is very striking. California built only 1 mile, Minnesota 2, South Dakota 1, Utah 2, Ohio 7 and Wisconsin 16. The South leads in railroad building as it does in industrial growth, and its railroad construction is on a solid basis, without any speculative manipulations to open up an unsettled country, as has been done so largely in the West. In the South the growth of the freight business is more rapid than the railroad facilities needed to handle.

## From New Berne to Wilmington

A press dispatch from New Berne, N. C., says:

There is no longer any doubt as to the construction of a railway between here and Wilmington. H. A. Whiting, general manager, and F. L. Pittman, chief engineer, of the Wilmington, East Carolina & Onslow Railway, have located the line of railway from Jacksonville to New Berne. Several gentlemen of Denver, Col., associated with them, went over the line from Wilmington. The purchase of the Norfolk & Edenton Railway by the Pennsylvania system, the determination to bridge the Chowan river and come on to Washington and New Berne, settles all difficulties and solves all doubts as regards the New York, Norfolk & Charleston Road, of which the Wilmington, New Berne & Onslow is an important link.

In 1883 a staff correspondent of the MANUFACTURERS' RECORD traversed the country between New Berne and Wilmington and obtained a clear idea of the natural but undeveloped resources of that coast region. Later, he, by invitation of the commercial organizations of the two cities, made addresses in both places setting forth the facts and urging the

importance of constructing a railroad that should connect the great corn counties of the sounds with tide-water on the Cape Fear, and, at the same time, develop the important forest and farming industries of the intermediate territory. Wilmington soon afterwards took the initiative, and work on the railroad to Onslow is rapidly progressing. The above dispatch indicates that the northern end of the line will soon be commenced and pushed to completion. We congratulate both cities on the benefits sure to accrue to them from this railroad connection.

SEVERAL weeks ago the Dakota, Wichita & Galveston was reported in these columns as organized. The plans of this company include the building of a standard gauge railroad from Bismarck, North Dakota, to Galveston, Texas, 2,000 miles. The charter gives the right to build and operate a telegraph line. The company has a capital stock of \$1,000,000, and its directors are: C. Eisenmayer, Jr., J. Winkley, J. L. Lange, W. F. Gehney and J. D. Dow, all of Halstead, Kansas. Mr. Eisenmayer, the president, writes us that no contracts have yet been let, as all the subsidies in view have not yet been secured.

Mr. D. W. FLICKWIR, superintendent of the Shenandoah Valley Railroad Co., has resigned.

Mr. W. A. VAUGHN has been appointed general superintendent of the East Tennessee, Virginia & Georgia system, and the office of superintendent of transportation abolished. The present incumbent of the latter office is Mr. E. B. Parke, and it is rumored that he will be appointed to a higher position.

THE agreement between the Richmond & Danville Railroad Co. and the Atlanta & Charlotte Air Line Co. contains a clause stating that when the gross annual earnings of the Atlanta & Charlotte Line shall exceed \$1,500,000 per annum, the amount of the annual payments on account of dividends on the stock of said Air Line shall be increased for the succeeding year by the sum of \$17,000. The earnings of the Atlanta & Charlotte for the year ending 31st day of March last exceeded \$1,500,000 by about \$85,000, and therefore the dividend payable on the stock September 1 and March 1 next will be three per cent. instead of two and a-half per cent., making the rate six per cent. per annum, instead of five per cent. per annum as heretofore.

ABOUT a year ago considerable interest was manifested in the construction to Hot Springs and to points in Texas of the proposed Memphis, Little Rock & Indian Territory Railroad Co. Some little work was done on the proposed line. It develops that the railroad company has filed a mortgage to the Holland Trust Co. for \$1,200,000. This amount is to be issued in bonds to the company at such times as desired. The mortgage covers the railroad, its franchise, right-of-way, terminal facilities, etc.

THE East Tennessee, Virginia & Georgia has acquired the Louisville Southern. The Louisville Southern was chartered as the Louisville, Harrodsburg & Virginia Railroad Co. in 1868, and its name was changed by the Kentucky legislature in 1884. The road was opened on May 16, 1888, and consists of the main line extending from Louisville to Burgin, Ky., a distance of eighty-two miles, and a branch eighteen miles long, from Versailles to Georgetown. The line has heretofore been operated by the Louisville, New Albany & Chicago Co.

## Railroad Construction

Anniston, Ala.—A stockholders' meeting of the Anniston & Atlantic Railroad Co. will be held on July 26 to sanction consolidation with the Anniston & Cincinnati Railroad Co.

Baltimore, Md.—Railroad.—John B. Brown, secretary Guspowder Valley Railroad Co., Room 17, 11 S. Gay street, lately referred to, will receive proposals for grading, masonry, laying of track, etc., of said road.

Beaufort, S. C.—Electrical Railroad.—It is stated that a route for an electrical railroad to extend to Port Royal has been surveyed.

Beebe, Ark.—Railroad.—Surveys are reported to have been commenced on the Beebe, Des Arc & Brinkley Railway, lately mentioned.

Bristol, Tenn.—Belt Railroad.—McDonald, Shea & Co., of Knoxville, are reported to have secured contract for the construction of the railroad lately referred to as to be built by the Bristol Belt Railroad Co.

Brooksville Fla.—Railroad.—It is rumored that the Silver Springs, Ocala & Gulf Railroad Co. (office, Ocala) has contracted with a phosphate company to construct a railroad to Hernando county within 90 days.

Brownwood, Texas.—Railroad.—The Fort Worth & Rio Grande Railroad Co. (office, Fort Worth) is making arrangements for an extension of its road from Brownwood to Comanche.

Camden, Ark.—Railroad.—The Camden & Alexandria Railroad will, it is reported, shortly commence the construction of a railroad to El Dorado.

Chattanooga, Tenn.—Railroad.—J. T. Robinson, of Athens, Ga., states that the Chattanooga Southeastern Railroad Co., mentioned last week, will commence work on its projected road to Athens at an early date.

Chattanooga, Tenn.—Railroad.—W. C. Durand will sublet contracts for construction of 40 miles of the Chattanooga Southern Railroad Co.'s extension, lately mentioned.

Columbia, La.—Railroad.—Henry Forrest & Co., of Memphis, Tenn., are reported to have secured contract for the construction of the Houston, Central Arkansas & Northern Railroad, lately referred to, from Columbia to Alexandria.

Darlington, S. C.—Railroad.—The Chester & Lenoir Railroad Co. (office, Chester) is, it is stated, surveying a line to the Pee Dee river.

Decatur, Ala.—Railroad.—J. T. Crass will let contract for grading and clearing 20 miles on the Decatur, Chesapeake & New Orleans Railroad, lately referred to.

Dulin's, N. C.—Railroad Bridge.—The Phoenix Bridge Co. is, it is stated, constructing a bridge for the Norfolk & Western Railroad Co. (office, Roanoke, Va.)

Eagle Rock, Va.—Howard & Sears will let contract for furnishing 80,000 cross-ties for the Craig Branch of the Chesapeake & Ohio Railway.

Easton, Md.—The Chesapeake Terminal Co. has been organized by Joseph B. Seth, Theophilus Tunis, E. J. B. Cross and others for the purpose of dealing in real estate and carrying on a forwarding and warehouse business; capital stock \$50,000.

East Point, Ga.—Railroad.—The Central Railroad & Banking Co. of Georgia (office, Savannah) will, it is reported, construct a double track to Hopewell.

El Paso, Texas.—Street Railroad.—The Santa Fe Street Railway Co. has been incorporated; capital stock \$50,000.

Ferguson, Ky.—Railroad.—It is rumored that the Louisville & Nashville Railroad Co. (office, Louisville) will construct a railroad to asphalt deposits, about 10 miles distant.

Harrisonburg, Va.—Railroad.—The Harrisonburg & Western Railroad Co. has been organized for the purpose of constructing a railroad. J. P. Houck, president, can give information.

Henrietta, Texas.—Railroad.—Contracts for the construction of the Gulf, Brazos Valley & Pacific Railway, previously referred to, will be let on July 15.

Hope Mills, N. C.—Tram-road.—The Enterprise Land & Improvement Co., of Fayetteville, will let contract within 30 days for the construction of the tram-road mentioned last week, 13 miles in length. The company intends building a second tram-road in about three months.

Kentwood, La.—Tram-road.—Bridwell & Co., of Ozyka, Miss., will, it is stated, construct a tram-road.

Knoxville, Tenn.—Electrical Railroad.—It is said that an electrical railroad will be constructed to the property of the Cherokee Land Co., mentioned elsewhere in this issue.

La Fayette, Ga.—T. E. Redmond will sublet contracts for construction of 30 miles of the Chattanooga Southern Railroad Co.'s extension, lately referred to. Apply at his camps near La Fayette.

Laredo, Texas.—Railroad.—The stockholders' meeting of the Texas Mexican Railway Co., to have been held on June 25, will be held on August 9.



Laurel, Md.—Street Railroad.—M. W. Choller writes that he will construct a street railroad within the next six months.

Lenoirs, Tenn.—Railroad.—The Lenoirs & Cincinnati Railroad Co. has been incorporated for the purpose of constructing the railroad previously reported as to extend to a point near Harri man. A. P. Chamberlain, E. J. Sanford, R. N. Hood and others are interested.

Lockport, La.—Railroad.—The Calcasieu, Yerron & Shreveport Railroad Co. has been organized by A. J. Perkins and others for the purpose of constructing a railroad to some point on the Calcasieu river.

Meridian, Miss.—Dummy Railroad.—The Bonita Park & Dummy Line Association has been organized by J. H. Wright, J. H. Walker, J. S. Solomon and others. The association owns property which it intends improving and to which it contemplates constructing a dummy railroad.

Millen, Ga.—Railroad.—J. M. Willis, of Thrift, confirms the report, lately referred to, that he has secured contract for grading the Millen & Southern Railroad. He states that the road will soon be in operation.

Mossy Creek, Tenn.—Street Railroad.—C. A. France can give information concerning the projected street railroad lately referred to.

Nashville, Ga.—Railroad.—The construction of a railroad is being considered. Hon. W. H. Smead can give information.

Orange C. H., Va.—The Buckingham Construction Co. has been organized with J. J. Granville, of Baltimore, Md., president, for the purpose of constructing the Orange & Keysville Railroad, previously mentioned.

Paducah, Ky.—Railroad.—T. J. Moss, of St. Louis, Mo., is reported to have contract for track laying, and M. S. Carter & Co., also of St. Louis, for trestling and bridging, on the Paducah, Tennessee & Alabama Railroad, lately referred to.

Pensacola, Fla.—Railroad.—The Montgomery, Pensacola & Mobile Railroad Co. has been incorporated by John C. Woolfolk, W. F. Joseph, B. C. Davidson, E. B. Joseph and others. The company intends constructing a railroad from Laverne, Ala., to a point near Pensacola.

Rome, Ga.—Railroad.—It is said that the Chattanooga Southern Railway Co. (office, Chattanooga, Tenn.) will construct a branch road to Rome.

Savannah, Ga.—Street Railroad.—The South Lake & Germantown Railway Co. has been organized with Wm. Rogers, president, and Wm. Schroeter, secretary. The company is organized to construct a street railroad from Savannah to a point on the Vernon river. Motive power not decided as yet.

Shelby, Ala.—Railroad.—Aldrich, Worthington & Co., of Birmingham, confirm the report that they have contract for the construction of 11 miles on the extension of the Anniston & Atlantic Railroad (office, Anniston) to Calera.

Snelbyville, Tenn.—Railroad.—Ford & Wilkerson is the St. Louis (Mo.) firm which has contract for constructing 15 miles on the Northern end of the Decatur, Chesapeake & New Orleans Railroad, lately referred to.

Trenton, Tenn.—Street Railroad.—W. L. Smith, L. B. Williamson and others are said to contemplate the construction of a street railroad.

Tyler, Texas.—Tram-road.—The Tyler County Lumber Co. will, it is said, construct a tram-road.

Waco, Texas.—The Granite Manufacturing Co., of St. Louis, Mo., has, it is stated, purchased the street railroads of Waco for \$23,500.

Winchester, Va.—Charles F. Nelson desires to correspond with companies making a specialty of constructing railroads at a specified amount per mile, to be paid in cash and bonds.

## Southern Financial News.

### NEW BANKS.

Baltimore, Md.—The Baltimore Savings & Bond Association has been incorporated by John Mauldin, P. E. Dubreuil, S. W. Guyton and others.

Birmingham, Ala.—The organization of a colored men's bank with a capital stock of \$50,000 is contemplated.

Brooksville, Ky.—The Bracken County Bank has been organized with a capital stock of \$20,000. W. S. Bradford is president and Younger Alexander, cashier.

Brunswick, Ga.—The Oglethorpe National Bank previously reported has increased its capital stock from \$150,000 to \$200,000.

Catlettsburg, Ky.—The Big Sandy National Bank is said to be considering the increase of its capital from \$50,000 to \$100,000.

Fort Worth, Texas.—The American Trust Co. has been incorporated with a capital stock of \$50,000.

Greenville, Ky.—The First National Bank has been organized with a capital stock of \$50,000.

Louisville, Ky.—The Columbia Finance & Trust Co. has been organized with a capital stock of \$300,000. E. T. Halsey is president.

Anniston, Ala.—The Bank of Anniston has declared a dividend of 8 per cent.

Augusta, Ga.—The National Exchange Bank of Augusta has declared a dividend of \$3 per share; the Augusta Factory has declared a dividend of 2½ per cent.

Baltimore, Md.—The Third National Bank has declared a semi-annual dividend of 3½ per cent.; the National Farmers & Planters' Bank, a semi-annual dividend of 5 per cent.; the Franklin Bank, a semi-annual dividend of 2 per cent.; the Baltimore & Reisterstown Turnpike Co., a dividend of 1 per cent., payable after July 17.

Charleston, S. C.—The following banks have declared dividends: The Merchants & Miners' Bank, a semi-annual dividend of \$3 per share; the Palmetto Dime Savings Bank, a semi-annual dividend of \$3 per share; the First National Bank, a semi-annual dividend of \$5 per share; the Bank of Charleston National Banking Association, a semi-annual dividend of \$3.50 per share; the Charleston Electric Light & Power Co., a dividend of 75 cents per share.

Centerville, Md.—The Centerville National Bank has declared a semi-annual dividend of 5 per cent.

Columbus, Ga.—The Eagle & Phoenix Manufacturing Co. has declared a semi-annual dividend of \$3 per share; the Georgia Home Insurance Co., a quarterly dividend of \$3 per share; the Merchants & Mechanics' Bank, a dividend of 5 per cent.

Cordele, Ga.—The Bank of Cordele has declared a semi-annual dividend of 5 per cent.

Dallas, Texas, is said to have sold its \$350,000 of bonds previously referred to to N. W. Harris & Co., of Chicago, Ill., at a premium of 115 per cent.

Dallas, Texas.—The City National Bank has declared a semi-annual dividend of 6 per cent.

Dalton, Ga.—The First National Bank has declared a semi-annual dividend of 5 per cent.

Fisher & Shaw, bankers, Baltimore, Md., offer for sale city of Charlotte, N. C., 30-year 5 per cent. bonds; the city of Tuscaloosa, Ala., 14 and 20-year 6 per cent. bonds; the city of Tampa, Fla., first mortgage 25-year 6 per cent. bonds; the Decatur (Ala.) Light & Power Co. first mortgage 19-year 6 per cent. bonds; the Anniston (Ala.) Gas & Light Co. consolidated mortgage 25-year 6 per cent. bonds; the Chattanooga (Tenn.) Electric Railway Co.'s first mortgage 19-year 6 per cent. bonds; the Brush Electric Co., of Baltimore, Md., first mortgage 20-year 5 per cent. bonds.

Fort Payne, Ala.—The First National Bank has declared a dividend of 4 per cent.

Frederick, Md.—The Franklin Savings Bank has declared a dividend of 3 per cent.

Frostburg, Md.—The First National Bank has declared a semi-annual dividend of 3 per cent.

Galveston, Texas.—The First National Bank has declared a semi-annual dividend of 6 per cent.; the Citizens' Land Co., a dividend of 5 per cent.; the Galveston National Bank, a semi-annual dividend of 4 per cent.; the Savings & Loan Co., a semi-annual dividend of 4 per cent.; the Masonic Temple, a dividend of \$1.50 per share, payable July 15.

Greensboro, N. C.—The National Bank of Greensboro has declared a semi-annual dividend of 5 per cent.

Houstonville, Ky.—The Houstonville National Bank has declared a dividend of 3 per cent.

J. Harmanus Fisher & Son, 16 South street, Baltimore, Md., offer for sale \$28,000 city of Wilmington, N. C., 20-year 5 per cent. bonds.

John A. Hambleton & Co., Baltimore, Md., offer for sale Savannah, America & Montgomery Railroad Co.'s first mortgage 6 per cent. gold bonds, principal due 1919.

Johnson City, Tenn., is considering the issuance of \$50,000 of bonds for street and school purposes.

Little Rock, Ark., is considering the issuance of \$200,000 of water works bonds.

Louisville, Ky.—The following concerns have declared dividends: The Falls City Insurance Co., a semi-annual dividend of 4 per cent.; the Third National Bank, a semi-annual dividend of 4 per cent.; the Louisville Banking Co., a quarterly dividend of 4 per cent.; the Western Insurance Co., a semi-annual dividend of 4 per cent.; the Western Bank, a semi-annual dividend of 4 per cent.; the Masonic Savings Bank, a semi-annual dividend of 4 per cent.; the Merchants' National Bank, a semi-annual dividend of 4 per cent.; the Falls City Bank, a dividend of 3 per cent.; the German Bank, a dividend of 9 per cent.; the Louisville Germania Insurance Co., a dividend of 4 per cent.

Lynchburg, Va.—The First National Bank has declared a dividend of 5 per cent.

Memphis, Tenn.—The Bank of Commerce has declared a dividend of 5 per cent.

Middendorf, Oliver & Co., bankers, 213 East German street, Baltimore, Md., offer for sale Jefferson county, Ala., 5 per cent. bonds; San Antonio, Texas, 5 per cent. bonds; city of Fort Worth, Texas, 5 per cent. bonds; the Knoxville Street Railway Co., Knoxville, Tenn., 6 per cent. bonds.

Nashville, Tenn.—The Merchants' Bank has declared a semi-annual dividend of 3 per cent.

New Berne, N. C.—The National Bank of New Berne has declared a semi-annual dividend of 5 per cent.

New Orleans, La.—The following banks have declared dividends: The People's Bank, a semi-annual dividend of 4 per cent.; the Hibernia National Bank, a dividend of 5 per cent.; the State National Bank, a semi-annual dividend of 3 per cent.; the Germania Savings Bank, a dividend of \$4 per share; the Germania National Bank, a semi-annual dividend of 5 per cent.; the Union National Bank, a semi-annual dividend of 4 per cent.; the New Orleans National Bank, a dividend of \$15 per share; the Mechanic & Traders' Insurance Co., a semi-annual dividend of 5 per cent.; the Firemen's Insurance Co., a semi-annual dividend of 5 per cent.; the New Orleans Insurance Association, a semi-annual dividend of 3 per cent.; the Southern Insurance Co., a semi-annual dividend of 4 per cent.; the Germania Insurance Co., a semi-annual dividend of 5 per cent.; the New Orleans & Carrollton Railroad Co., a quarterly dividend of \$1.50 per share; the New Orleans Gas Light Co., a dividend of \$2.50 per share; the Ann Arbor Mining & Milling Co., a dividend of 1 per cent.

Norfolk, Va.—The Norfolk National Bank has declared a semi-annual dividend of 3 per cent.

Richmond, Ky., has decided by popular vote not to issue the bonds previously mentioned for the purpose of erecting a schoolhouse.

Richmond, Va.—The following banks have declared dividends: The State Bank of Virginia, a dividend of 3 per cent.; the Virginia Fire & Marine Insurance Co., a dividend of 5 per cent.; the Old Dominion Steamship Co., a dividend of 3 per cent.; the City Bank of Richmond, a dividend of 3 per cent.; the Planters' National Bank of Richmond, a dividend of 4 per cent.; the Union Bank of Richmond, a dividend of 4 per cent.; the Merchants & Planters' Savings Bank, a dividend of 2 per cent.; the National Bank of Virginia, a dividend of 4 per cent.; the First National Bank of Richmond, a dividend of 5 per cent.; the Virginia State Insurance Co., a semi-annual dividend of 3 per cent.; the Richmond Perpetual Building, Loan & Trust Co., a dividend of 5 per cent.; the Merchants & Planters' Savings Bank, a dividend of 2 per cent.; the People's Building, Loan & Trust Co., a dividend of 8 per cent.; the Richmond & Petersburg Railroad Co., a dividend of 3½ per cent.; the Guarantee Building, Loan & Trust Co., a dividend of 4½ per cent.; the Merchants' National Bank, a semi-annual dividend of 3½ per cent.; the Granite Perpetual Building Fund Co., a semi-annual dividend of 4½ per cent.

Rockville, Md.—The Montgomery County National Bank has declared a semi-annual dividend of 3 per cent.

S. A. Kean & Co., bankers, 115 Broadway, New York, N. Y., offer for sale the city of Cleburne, Texas, 6 per cent. bonds.

Savannah, Ga.—The Merchants' National Bank has declared a semi-annual dividend of 4 per cent.; the National Bank of Savannah, a semi-annual dividend of 3 per cent.

The Alabama Coal & Iron Co., Shelby, Ala., has declared a dividend of 2 per cent., payable August 1 at the office of W. S. Gurnee, 82 Broadway, New York city.

The Americus Investment Co., Americus, Ga., has declared a dividend of 100 per cent.

The Atlanta & Charlotte Air Line Railway Co. (office, 48 Wall street, New York city) has declared a dividend of 6 per cent.

The Birmingham Trust & Savings Co., Birmingham, Ala., has declared a semi-annual dividend of 3 per cent.

The Cumberland Telephone Co., Nashville, Tenn., has declared a quarterly dividend of 1¼ per cent.

The Henderson Storage Warehouse Co., Henderson, N. C., has declared a dividend of 11 per cent.

The Louisville & Nashville Railroad Co. (office, Louisville, Ky.) has declared a dividend of 190-100 per cent., payable in stock, a cash dividend of 100 per cent. and an extra cash dividend of 1 per cent., payable on August 4.

The Provident Bank, of Baltimore, Md., has, it is stated, purchased the Kent county (Md.) bridge bonds at 103½.

The Winstonsboro Granite Co., Charleston, S. C., has declared a dividend of 4 per cent.

Waco, Texas contemplates issuing \$100,000 of bonds for street improvements.

Wilson, Colston & Co., bankers, Baltimore, Md., offer for sale \$1,500 Prince George's county, Md., 5 per cent. bonds; \$3,000 Laurel, Md., 5½; \$7,500 Spartansburg (S. C.) Water Co.'s 6s.

## Foreign Exchange Quotations.

ALEXANDER BROWN & SONS, BALTIMORE, July 9, 1890.			
Sterling.—		Commercial.	
Selling.		48½ @ 48¾	
60 days.....	48½		
3 days.....	48½		
Francs.—		Commercial.	
Selling.		520½ @ 521½	
60 days.....	516½		
3 days.....	515		
Reichmarks.—		Commercial.	
Selling.		60 days..... 94½	
60 days.....	95½	3 days..... 94½	
3 days.....	90½		
Guilders.—		Commercial.	
Selling.		60 days..... 39½	
60 days.....	41¾	3 days..... 40½	
3 days.....	40½		

## Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, July 9, 1890.			
	BID.	ASKED.	
Virginia 6's Consols C.....	50	52	
Virginia 3 4 5 10-40's.....	39	41	
Virginia 3's, new.....	68½	69½	
Virginia Consul Coupons, N. F.....	25	26	
Virginia 10-40 Coupons, N. F.....	27	28	
N. Carolina 4's.....	100	100	
Norfolk Water 8's C.....	130	130	
Baltimore & Ohio.....	106½	107	
Northern Central.....	69	69	
Central Ohio.....	54	54	
Atlanta & Charlotte.....	97½	98½	
B. & O. Extended 4's.....	101	101½	
Pitts. & Con. 1st 7's.....	115	115	
Northern Central 4½'s.....	104	107	
Northern Central 6's.....	114	116	
Northern Central 5's (series B).....	110	110	
Ca. Car. & N. 5's.....	101½	102	
Central Ohio 6's.....	102	102	
Cin. Wash. & B. (En B. & O.) 1st 4½'s.....	90½	100½	
Will., Col. & Aug. 6's.....	118	118	
Ohio & M. 2d.....	122½	122½	
Atlanta & Char. 1st 7's.....	120½	120½	
Col. & Green. 1st 6's.....	106½	108	
Col. & Green 2d 6's.....	84½	85	
Va. Midland, 3d 5-6's.....	112	112	
Va. Midland, 3d 5's.....	102½	103½	
West Va. Central 1st 6's.....	103½	104½	
Ga. Pacific 1st 6's.....	111	111½	
Ga. Pacific 2d.....	77½	78½	
West. Nor. Car. Cons'd 6's, Gold.....	101	101	
Cape Fear & V. Valley 6's, B.....	102½	103	
Cape Fear & V. Valley 6's, C.....	103½	103½	
Consolid. Gas Stock.....	51½	52½	
Consolid. Gas Bonds 6's.....	114	114½	
Canton Co.....	53½	54	

## JOHN L. WILLIAMS & SON, BANKERS, RICHMOND, VA.

Our Manual of Investments for 1890, the largest work of the kind published by any banking house in America, (406 pages, octavo, cloth), may be had without charge by clients, correspondents and those expecting to do business with us; by others at \$2 per copy.

## Richmond Stock Exchange Quotations.

Reported by JOHN L. WILLIAMS & SON, Bankers, Richmond.

RICHMOND, VA., July 8, 1890.			
	BID.	ASKED.	
North Carolina 4's, 1910.....	99½	101	
North Carolina 6's, 1910.....	125	127	
Virginia New 3's, 1932.....	68½	68½	
Lynchburg, Va., 5's, 1915.....	104	104	
Petersburg, Va., 5's, 1918.....	103½	104	
Norfolk, Va., 5's, 1911.....	104	104	
Richmond, Va., 5's, 1922.....	110	114	
Atlanta & Charlotte Ry., 1st 7's, 1907.....	120½	121	
Atlanta & Charlotte G'd 6's, 1900.....	105	105	
Char., Col. & Aug. R.R. Gen. 6's, 1932.....	108½	110	
Georgia Pacific Ry. 1st 6's, 1922.....	110	110	
Georgia Pacific 2d 5's, 1923.....	75	80	
Ga. Pacific Incomes, 5's.....	30	30	
Petersburg Railroad Class A 5's, 1926.....	102	102	
Petersburg Railroad Class B 6's, 1926.....	110	110	
Rich. & Danville R. R. Gold 6's, 1915.....	115	115	
West. N. Car. R. R. G'd 6's, 1914.....	107½	108	
Northern N. Car. R. R. 1st 6's.....	101½	103	
Atlanta & Charlotte R. R. Stock.....	95½	98	
North Carolina Railroad Stock.....	100	103	
R. F. & Pot. R.R. Div'd Obligations.....	112	112½	
Virginia Midland Railway Stock.....	53	56	
Sloss Iron & Steel Co. Stock.....	94	94	
Sloss Iron & Steel Co. 1st 6's.....	94½	94½	
Sloss Iron & Steel Co. 2d 6's.....	68½	68½	

**DESKS, Chairs, Office Furniture**  
SEND FOR CATALOGUE.  
**DERBY & KILMER DESK CO.**  
Salesrooms, opp. Lowell Depot, 80 Causeway St., Boston.

## NEW & KODAKS.

"You press the button, we do the rest."

**Seven New Styles and Sizes**  
ALL LOADED WITH **Transparent Films.**  
For Sale by all Photo. Stock Dealers.  
**THE EASTMAN COMPANY,**  
Send for Catalogue. ROCHESTER, N. Y.



## SOUTHERN STOCKS.

## OFFICIAL QUOTATIONS BIRMINGHAM STOCK EXCHANGE.

Corrected Weekly by MARTIN & LEEDY, Stock and Bond Brokers, and Members  
Birmingham Stock Exchange.

SATURDAY, JULY 5, 1890.

STOCKS.		LAST DIVIDEND.			
BANKS.	Organized.	Capital	Par	Declared.	Per Cent.
Alabama National.....	1886	\$500,000	100	July '90	a 4
American National.....	1886	250,000	100	July '90	a 4
Bank of Atlanta.....	1889	50,000	100	July '90	a 5
Barney National.....	1886	300,000	100	July '90	a 5
Birmingham National.....	1887	250,000	100	July '90	a 3
Central Savings.....	1889	50,000	100	July '90	a 3
City National.....	1889	100,000	100	July '90	a 6
First National.....	1884	250,000	100	July '90	a 6
First National Bank of Gadsden.....	1887	50,000	100	July '90	a 6
Jefferson County Savings.....	1885	150,000	100	July '90	a 3
Birmingham Trust & Savings Co.....	1887	500,000	100	July '90	a 3
Mutual Loan & Trust Co.....	1888	50,000	100	July '90	a 3
People's Savings Bank & Trust Co.....	1888	50,000	100	July '90	a 4
RAILROADS.					
Birmingham Union Railway Co.....	1887	1,000,000	50	.....	25
Birmingham & Ensley Railway Co.....	1887	250,000	50	.....	25
North Birmingham Street R. R. Co.....	1887	25,000	50	.....	45
Highland Avenue & Belt R. R. Co.....	1887	1,000,000	100	.....	25
South & North Alabama R. R. Co.....	.....	.....	.....	.....	32
MISCELLANEOUS.					
Avondale Land Co.....	1884	150,000	100	Oct., '88	2
Anniston City Land Co.....	1887	3,000,000	100	July, '87	q 4
Alabama Coal & Iron Co.....	1889	1,000,000	100	.....	119
Alabama-Cannelton Coal & Coke Co.....	1886	250,000	100	.....	23
Bessemer Land Co.....	1887	2,500,000	100	May, '87	q 2 1/2
Birmingham Mining & Mfg. Co.....	1887	150,000	100	May, '87	q 3 3/4
Birmingham-Ensley Land Co.....	1886	450,000	100	.....	5
Birmingham Ice Factory.....	1886	85,000	100	July, '89	a 10
Birmingham Water Works Co.....	1887	500,000	100	.....	80
Birmingham Soap Works Co.....	1886	50,000	100	.....	22
Brooklyn Land Co.....	1886	1,400,000	100	.....	16
Birmingham Furnace & Mfg. Co.....	1886	1,500,000	100	.....	10
Camille Gold Mining Co.....	1887	1,500,000	10	.....	1/2
Cahaba Coal Mining Co.....	.....	1,400,000	100	.....	70
Chattanooga East End Land Co.....	1887	4,000,000	100	.....	15
DeBardeleben Coal & Iron Co.....	1887	4,000,000	100	.....	76
Decatur Land Imp. & Furnace Co.....	1887	5,000,000	100	.....	13 1/2
Decatur Mineral Land Co.....	1887	350,000	100	Oct., '87	q 3
Elyton Land Co.....	1871	300,000	100	Nov. 10, '87	q 1
Edison Electric & Illuminating Co.....	1886	100,000	100	July, '89	a 4
East Birmingham Land & R. R. Co.....	1886	1,022,800	100	.....	10
East Lake Land Co.....	1886	200,000	100	June, '87	n 50
Ensley Land Co.....	1886	10,000,000	100	.....	10
Enterprise Manufacturing Co.....	1886	100,000	100	.....	22 1/2
Eureka (Furnace) Co.....	.....	.....	.....	.....	130
Florence Land & Mining Co.....	.....	3,000,000	100	April, '89	1
Gadsden Land Co.....	1887	3,000,000	100	April, '87	q 1
Gate City Land Co.....	.....	.....	.....	.....	24
Hecla Coal Co.....	1888	300,000	100	.....	80
Henderson Steel & Mfg. Co.....	1887	100,000	100	.....	65
Jefferson Building & Improvement Co.....	1887	150,000	100	.....	9 1/2
Jagger-Townley Coal & Coke Co.....	1887	350,000	100	.....	52
Leeds Land Co.....	1887	150,000	100	.....	100
Mag Ellen Coal & Mining Co.....	1887	100,000	100	.....	30
Mary Lee Coal & Railway Co.....	1888	300,000	100	.....	37 1/2
North Birmingham Land Co.....	1886	700,000	100	.....	1 1/2
Smithfield Land Co.....	1886	850,000	100	.....	44
Sloss Iron & Steel Co.....	1887	4,000,000	100	Sept. 2, '89	h 1
South Anniston Land Co.....	1887	750,000	100	Mch., '87	x 5
Sheffield Coal & Iron Co.....	1881	1,000,000	100	Feb., '87	.....
Thompson Brick Co.....	1887	30,000	100	May 15, '87	.....
Tennessee Coal & Iron Co.....	1887	9,000,000	100	.....	100
Tennessee Coal & Iron Co., pref.....	.....	1,000,000	100	.....	24
Tuscaloosa Coal, Iron & Land Co.....	1887	1,000,000	100	.....	78
Vulcan Coal & Coke Co.....	.....	100,000	100	.....	50
West End Land Co.....	1886	175,000	100	.....	41
Woodstock Iron Co.....	1887	3,000,000	100	.....	.....
BONDS.					
Alice Furnace.....	.....	300,000	.....	.....	.....
Birmingham Gas & Electric Light Co.....	.....	340,000	.....	.....	.....
Birmingham Union Railway Co.....	.....	500,000	.....	.....	.....
Birmingham Water Works.....	.....	400,000	.....	.....	.....
Cahaba C. & M. Co., 1st Mortgage.....	.....	750,000	.....	.....	.....
Caldwell Hotel.....	.....	150,000	.....	.....	.....
Elyton Land Co., Trust Bonds.....	.....	2,400,000	.....	.....	.....
Eureka (Furnace) Co.....	.....	400,000	.....	.....	.....
Henderson Steel & Mfg. Co.....	.....	50,000	.....	.....	.....
Mary Pratt Furnace.....	.....	100,000	.....	.....	.....
Sloss Iron & Steel Co., 1st Mortgage.....	.....	2,000,000	.....	.....	.....
Williamson Iron Co.....	.....	2,000,000	.....	.....	.....
Tennessee Coal, Iron & R. R. Co.,	.....	60,000	.....	.....	.....
Tennessee Division.....	.....	1,354,000	.....	.....	.....
Birmingham Division.....	.....	3,640,000	.....	.....	.....

EXPLANATION.—a—For six months. q—Only dividend declared since organization. x—This company declared 5 per cent. February 1, also. z—Total dividends paid, 49 per cent. 1—Dividend for one year, ending July 1, 1889. E—Sold hereafter Ex 15 per cent. dividend. o—Dividend 3 per cent. paid in May, '87, also October 1. n—Fifty per cent. Dividend on Union R. R. Stock. h—Payable October 15, 1889. f—A 5 per cent. Dividend has been paid quarterly since organization. w—For dividends refer to the company. \* \* \* May 6, '87, 50 per cent. cash; May 10, '87, 50 per cent. cash; Sept. 14, '87, 50 per cent. cash; Oct. 10, '87, 10 per cent. cash; Oct. 10, '87, 10 per cent. cash; Nov. 10, '87, 10 per cent. cash; Nov. 10, '87, 100 per cent. in Elyton Land Company's Trust Bonds.

**FREDERIC TAYLOR & CO.**  
Bankers and Brokers,  
84 BROADWAY,  
NEW YORK CITY.

Members of the New York Stock Exchange.

**P. J. GOODHART & CO.**  
(Members of the New York Stock Exchange.)

24 BROAD STREET, NEW YORK.

Orders executed in New York and Boston for  
buying and selling stock of the

**Anniston City Land Co.**

We are prepared to carry same on  
\$10 per share MARGIN.

We make a specialty of all

**Southern Securities.**

**The Southern Investment Co.**

J. J. BURNS, Manager.

167 DEAR ORN STREET, CHICAGO, ILL.

BUY AND SELL

**Southern Real Estate,**

CITY AND TOWN PROPERTY.

Mineral and Timber Lands,  
Mines, Mills, Furnaces  
and Factories.

COLONIES ESTABLISHED.

Correspondence Solicited.

**BANK**  
OFFICE  
AND STORE FIXTURES  
THE TERRY MFG. CO.  
NASHVILLE TENN.

## ALEX. BROWN &amp; SONS

ESTABLISHED 1811.

Cor. Baltimore and Calvert Streets,  
BALTIMORE, MD.

BROWN BROTHERS &amp; CO.

New York, Philadelphia and Boston.

Foreign and Domestic Bankers,

AND MEMBERS OF THE

Baltimore, New York and Philadelphia  
Stock Exchanges.(Private wire between Baltimore, Boston,  
Philadelphia and New York.)Interest allowed on deposits of  
Banks, Bankers, Corporations and in-  
dividuals (by agreement). Railroad,  
Municipal & other Loans Negotiated.

BUY AND SELL BILLS OF EXCHANGE

on Great Britain and Ireland, France, Germany,  
Holland, British West Indies and other foreign  
points.Issue Commercial and Travelers'  
Letters of Credit.IN STERLING, available in any part of the  
world; and IN DOLLARS, for use in this  
country, Canada, Mexico, the West Indies and  
South America.Make Cable and Telegraphic Transfers  
of Money.

Drafts Collected in all parts of the World.

BROWN, SHIPLEY &amp; CO., LONDON.

## THE UNION MANUFACTURING COMPANY.

Owing to the large demand for  
machines, offer a limited  
amount of stock at**\$6.00 PER SHARE.**Machines cost only \$8, and  
the net income from each  
is \$42 per annum.

Now Paying Dividends of  
10 Per Cent.

Make all checks payable to

**R. H. WHITNEY & CO.**

75 State Street, BOSTON, MASS.

**WILSON, COLSTON & CO.** [Members of Baltimore  
Stock Exchange.]

**BANKERS.**

216 East Baltimore Street, Baltimore, Md.

Investment and Miscellaneous Securities a specialty, and large lines handled. Exceptional facilities for  
dealings in all classes of Southern Bonds. Loans on Collateral Securities negotiated. Quotations and  
information furnished on application and correspondence invited.

J. Wm. MIDDENDORF

Members Baltimore Stock Exchange.

Wm. R. OLIVER.

**MIDDENDORF, OLIVER & CO.****BANKERS AND BROKERS,**

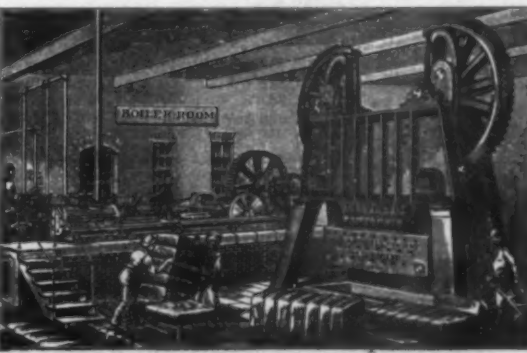
No. 213 E. German Street,

[KEYER BUILDING.]

Baltimore, Md.

Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Invest-  
ment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.

## THE CAMPBELL COTTON COMPRESS

Is sold on the following **GUARANTEE**:DENSITY Obtained  
Equal to Any.COST of Plant Less  
Than Any.EXPENSE of Running  
Half of Any**First-Class Compress.**

Correspondence Solicited.

The Campbell Cotton  
Compress Co.

109, 111, 113 & 115 E. Front St.  
CINCINNATI, O.

# CONSTRUCTION DEPARTMENT.

**WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.**

THE past week has been a noted one for the activity in the organization of gigantic industrial enterprises, the magnitude of which overshadows the many smaller concerns that would otherwise command much attention. In Alabama, Tredegar leads with a contract for the building there of a great furnace and steel plant to include rolling mill, steel mill, &c., and to employ, when fully completed, about 3,000 hands; Birmingham has a new \$1,000,000 coal and iron making company; Huntsville a \$50,000 oil company. Georgia shows for the week a \$150,000 ore mining company, a \$100,000 land and lumber company, a \$30,000 clothing manufacturing company, a \$6,000,000 gold mining company, and \$400,000 phosphate mining company to operate in Florida. At Ocala, Fla., an \$800,000 company has been organized to mine and manufacture fertilizers. Kentucky had for the week a \$2,000,000 iron and coal company and a \$500,000 land improvement company. In Southwest Virginia the great activity previously reported continues. At Richlands Pennsylvania capitalists will build \$500,000 iron pipe work and at Radford iron men from the same State will erect two furnaces, a rolling mill, bar, bolt and rail mill, &c., while at Ivanhoe a \$500,000 company will build extensive zinc works. While these great concerns are being put into shape the organization of smaller enterprises, such as woodworking mills, brick-yards, ice factories, foundries and machine shops, goes steadily on. In every direction there is solid growth and increasing prosperity, based on the utilization of the unequalled natural resources of this favored section. The second half of 1890 bids fair to show a degree of activity that would have been deemed almost impossible even twelve or eighteen months ago.

\*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

J. R. Brumley and R. B. Simpson, of Marietta, Ga., will erect works at some suitable point in Alabama, Arkansas or Texas for the manufacture of spokes, hoe handles and other hardwood work.\*

## ALABAMA.

Birmingham—Iron Furnaces.—The Tennessee Coal, Iron & Railroad Co. has blown out its two Alice coke iron furnaces for repairs.

Birmingham—Ice Factory.—The People's Ice Manufacturing Co. will, it is reported, put in two 30-ton ice machines.

Birmingham—Iron Furnace, etc.—The Pratt Iron, Coal & Railroad Co. has been organized with William A. Walker, president, and F. D. Nabers, secretary, and purchased, it is stated, the property of the Mary Pratt Furnace Co., including a coke iron furnace, for \$500,000. The company is also said to have secured 18,000 acres of coal and mineral lands. The capital stock is \$1,000,000.

Birmingham—Oil Wells.—A Columbus (O.) party, representing an oil company, will, it is stated, organize a \$50,000 stock company to sink oil wells near Birmingham.

Birmingham—Ice Factory.—The Artesian Ice Factory Co., lately mentioned, has been incorporated with a capital stock of \$100,000.

Birmingham—Machine Shop.—The Georgia Pacific Railroad Co., previously mentioned as to build new shops, will erect in the near future a wood machine shop and section of a roundhouse. It will probably erect machine, lumber and smith shops next year.

Blocton—Saw Mill.—Dean & King, of Birmingham, will, it is reported, erect a saw mill near Blocton.

Carbon Hill—Coal Mines.—The Carbon Hill Coal & Coke Co., recently mentioned, will erect new machinery at shaft No. 1, to replace plant destroyed by an explosion.

De Armanville—Cotton Gin.—The Farmers' Alliance is reported as to erect a cotton gin.

Fort Payne—Gas Works.—The Fort Payne Gas Light Co. has been organized with S. W. Johnson as president and S. D. Monroe, secretary, to construct and operate gas works.

Horse Creek—Coal Mines.—It is stated that Walter Moore is the purchaser of the coal mines of the Mag-Ellen Coal & Mining Co., mentioned in last issue.

Huntsville—Oil and Gas Wells.—R. A. Simmons, of Manchester, N. H.; Jacob Davis, J. H. Bone and others have incorporated the Alabama Oil Co. to sink oil and gas wells. The capital stock is \$50,000.

Sheffield—Iron Furnaces.—The Alabama Iron & Railway Co., lately reported as to be organized to operate the three coke iron furnaces of the Sheffield & Birmingham Coal, Iron & Railway Co., will, it is stated, add new engines and other machinery.

Spring Garden—Broom and Chair Factory.—G. W. Rutherford and others will erect the broom and chair factory mentioned in last issue.

Tredegar (P. O. Jacksonville) Steel Works, etc.—It is stated that the Jacksonville Mining & Manufacturing Co. has completed negotiations with Eastern and foreign capitalists for the building of large steel works, to include rolling mill, steel mill, etc., and to employ, when completed, 3,000 men. The company which proposes erecting the plant also intends constructing a system of water works.

Wetumpka—Excelsior Factory.—Jackson & Bro., lately mentioned, contemplate adding excelsior machinery to their lumber mill.\*

## ARKANSAS.

Batesville—Iron Foundry.—The Batesville Iron Works Co. has been organized with J. C. Bone, president; G. H. Kealer, vice-president, and C. T. Rosenthal, secretary, to operate an iron foundry. The capital stock is \$6,500.

Clarksville—Coal Lands.—W. M. Morris, representing a company of Eastern and European capitalists, proposes, it is stated, optioning about 20,000 acres of coal lands near Clarksville for development.

Harlow—Lumber Mill.—The Eureka Lumber Mill Co. is rebuilding its lumber mill, recently burned.

Little Rock—Saddlery and Harness Factory.—John Straub, of Paris, Texas, is investigating with a view to establish a saddlery and harness factory.

Little Rock—Motor Works.—The National Railway Water Service Co. has been incorporated with T. W. Bond as president, and C. E. Rice, secretary, to manufacture a patent water motor. The capital stock is \$500,000. This company is probably connected with the Layman Rice Railway Motor Co. previously mentioned.

Little Rock—Brewery.—A stock company will probably be organized to erect a brewery.

## FLORIDA.

Anthony—Shingle Mill.—J. A. Smith will erect a shingle mill.\*

Apalachicola—Tannery.—Judge Hicks is experimenting with a process of tanning leather by palmetto roots, and will probably establish a tannery.

Apalachicola—Shingle Mill.—Local parties contemplate erecting a shingle mill on the Eldridge place.

Bellevue—Cotton Gin.—C. T. Trask intends erecting a cotton gin.\*

Charlotte Harbor—Phosphate Mines.—The Charlotte Harbor Phosphate Co. has been incorporated at Savannah, Ga., by J. L. Hammond and Joseph Hull, of that city, and A. Backer, of New York, to develop phosphate lands, and is also privileged to manufacture fertilizers and chemicals. The capital stock is \$400,000.

De Land—Ice Factory.—The De Land Ice Factory is reported as to be enlarged.

Fernandina—Ice Factory.—Leo Tuska contemplates erecting an ice factory.

Green Cove Spring.—The Melrose Lumber Co. has been organized by Dexter Hunter, W. J. Wilson and others, with a capital stock of \$50,000.

Hawthorne—Furniture Factory.—The erection of a furniture factory is talked of.

Jacksonville—Paving.—W. C. West will receive bids until July 15 for paving with cement certain walks in the public park.

Mannfield—Phosphate Mines.—C. M. Brown and R. R. Snowden are organizing the Citrus County Hard Rock Phosphate Co., referred to in last issue, to develop phosphate lands.

Marion County—Phosphate Lands.—Dr. G. H. Sutherland, of Gainesville, is reported as purchasing phosphate lands in Marion county.

Ocala—Foundry and Machine Shop.—The Gardner Manufacturing Co., lately mentioned, has been organized with D. H. Irvine, of Orange Lake, president; Charles Rheinaur, vice-president, and F. N. Harrison, secretary, to erect a foundry and machine shop.

Ocala—Water Works.—An election will be held on August 14 to consider the issuance of \$100,000 of bonds to purchase the water works of the Ocala Water Co., lately mentioned.

Ocala—Mineral Lands, &c.—R. C. Wright, J. A. Harris, F. E. Harris and others have incorporated the Ocala & Blue River Phosphate Co. to develop mineral lands, manufacture fertilizers, &c. The capital stock is \$300,000.

Palatka—Bottling Works, etc.—Jacob Stern will, it is reported, start bottling works.

Santos—Phosphate Mines.—S. R. Pyles, William Trimble, of Georgia; W. D. and G. A. Morton and others will, it is stated, organize the Standard Phosphate Co. to develop phosphate beds near Santos.

Trenton—Phosphate Mines.—It is stated that the Bradley Fertilizer Co., of Boston, Mass., and others will develop 5,000 acres of phosphate lands near Trenton.

Villa City—Kaolin Mines.—The stock company reported in last issue as to develop kaolin will be organized if expert examination of the property is satisfactory. George T. King can give information.

## GEORGIA.

Atlanta—Printing Office.—The Constitution Publishing Co. will put new machinery in its press room.

Atlanta—Ammonia Factory.—The organization of a company to manufacture ammonia is proposed.

Augusta—Ice Factory.—Another ice factory is reported as to be built.

Augusta—Ice Factory.—The Polar Ice Co. is reported as to put in a new 20-ton ice machine.

Brunswick—Bottle Factory.—C. B. Holton, of Lexington, Ky., is investigating with a view of establishing a bottle factory.

Brunswick—Manufacturing.—C. Downing, Jr., R. W. Paterson, J. J. Conoley and others have incorporated the Downing Co. to manufacture naval stores, &c. The capital stock is \$300,000.

Brunswick—Phosphate Mines.—H. A. Lucas, C. P. Goodyear, G. W. Haines, W. E. Kay, A. F. Wilder, C. B. Conyers, A. B. Rowe, T. Stockton, C. D. Owens and L. J. Brown have each secured licenses to mine phosphates.

Columbus—Clothing Factory.—G. J. Peacock, R. H. Peacock and G. Y. Banks have incorporated the G. J. Peacock Clothing Co. to manufacture clothing, &c. The capital stock is \$30,000.

Cordele—Acid Chamber.—The Cordele Guano Co., referred to in last issue, will erect acid chamber with capacity for 4,000 tons of phosphate per annum.

Gainesville—Gold Mines.—The Gold Mountain Mining Co. has been incorporated to succeed the St. George Gold Mining Co., as lately mentioned. The capital stock is \$6,000,000.

Gainesville—Electric-light Plant.—The city has, it is stated, purchased the Gainesville electric-light plant, lately mentioned, for \$8,450. The mayor can give information.

Georgia—Saw Mill.—W. F. Ussery & Co have established a large saw mill at Alamo, on the Savannah, Americus & Montgomery Railroad.

Griffin—Water Works.—The Griffin Water & Light Co. organized by W. A. & J. F. Robinson and W. A. Bedell, has franchise for water works mentioned in last issue.

Hawkinsville—Barrel Factory.—B. Holmes and Sommer Bros. are reported as to establish a barrel factory.

Heath—Cotton Gins.—R. J. Godbee and J. F. Bates contemplate putting new engines in their gin-houses.

Macon—Land.—The Central Georgia Land & Lumber Co., reported in last issue as organized, has been incorporated with a capital stock of \$100,000.

Marietta—Flour Mills.—Mrs. J. A. Richards, of Atlanta, has, it is reported, purchased the flour mills of the Kennesaw Mills Co. for \$28,000.

Rockmart—Mining, Manufacturing, &c.—The Rockmart Land & Improvement Co. has been incorporated by C. M. Shelley, of Birmingham, Ala.; C. R. Harkins, of Atlanta; W. P. Davis and others. The company proposes building the town of East Rockmart, and is authorized to do a mining, manufacturing and real estate business. The capital stock is \$1,000,000.

Newnan—Planing Mill.—Reese & Turner are erecting a planing mill.

Newnan—Laundry.—The erection of a steam laundry is talked of.

Savannah—Land.—C. A. Reitze is president; H. C. Davis, vice-president, and A. Minis, secretary, of the Citizen's Land Co., lately reported.

Savannah—Laundry.—J. N. Johnson, 154 South Broad street, contemplates starting a steam laundry.\*

Savannah—Artesian Wells.—James Mulligan has contract for sinking two ten-inch artesian wells for the city, and will soon commence drilling.

Way Cross—Laundry.—W. E. Spangler will, it is reported, establish a steam laundry.

## KENTUCKY.

Barboursville—Ice Factory.—The Cumberland Beverage Works, mentioned in last issue, will put in an ice machine.\*

Covington—Glass Works.—The fire at the works of the Hemingray Glass Co., mentioned in last issue, destroyed the roof of the tank furnace, which is being replaced.

Covington—Sulphur Works.—The National Sulphur Co. has been incorporated by Cornelius Beard, C. M. Bruge, Frank M. Kerr and others, of Cleveland, Ohio. The company is privileged to prepare for market sulphur, petroleum, salt, iron, copper and gypsum. The capital stock is \$10,000,000.

Covington—Mining and Smelting.—John McLeis, J. S. Day, J. H. Oberwille and others have incorporated the Latinal Mining & Smelting Co. with a capital stock of \$180,000.

Danville—Turkpike.—The Bluegrass Turnpike Road Co. has been incorporated to build a macadamized turnpike road.

Dayton—Land.—A. F. Goetze, C. B. Hayward, W. J. Wilmer and others have incorporated the Dayton Town Lot & Home Co. to improve land, &c. The capital stock is \$50,000.

Fulton—Stave Factory.—J. G. Keys & Son, of New York City, will, it is reported, establish a stave factory in Fulton.

Fulton—Ice Factory.—F. M. Usher, J. W. Boyd, W. J. Burnett and others talk of starting an ice factory.

Henderson—Canning Factory, &c.—Thomas Soaper is president, A. B. Lights, vice president, and R. C. Soaper, secretary, of the company recently reported as organized to establish a butter, cheese and canning factory.

Henderson—Furniture Factory.—A. S. Winstead has, it is reported, purchased the Henderson Furniture Manufactory for \$11,500, and will organize a stock company to operate same.

Henderson—Land.—Dr. Hardin, Charles Dishman, E. G. Seebree, Jr., and others are reported as to organize a \$500,000 land company to purchase and improve lands, locate manufactories, &c.

Louisville—Distillery.—The whiskey distillery of the Allen-Bradley Co., mentioned elsewhere in this issue as burned, is reported as to be rebuilt at once with increased capacity.

Morehead—Saw Mill.—Graham & Mitchell, of Toledo, Ohio, are reported as to erect a saw mill.

Newport—Electrical Works.—H. P. Young and H. G. Rich have incorporated the Electric Protector & Specialty Co. to manufacture protectors for electric instruments, &c. The capital stock is \$10,000.

Roanoke—Grist and Saw Mill.—D. F. Duncan & Son, of Hodgenville, have, it is reported, moved their saw mill to Roanoke, and will erect a grist mill.

Somerset—Water Works.—Contract has been let, it is stated, for the construction of the water works lately mentioned. L. Parsons can give particulars.

Somerset—Water Works.—The Kentucky Water, Heating & Illuminating Co., of Lexington, have received contract to construct the water works mentioned in last issue.

Sturgis—Flour Mill.—D. A. Brooks, Jr., & Co. will, it is reported, increase the capacity of their flour mill.

Sykesville—Flour Mill.—C. B. Wilson will, it is stated, put roller machinery in his flour mill.

Taylorsville—Distillery.—McCrocklin & Co. will probably add a distillery to their flour mill.



## LOUISIANA.

Bermuda-Cotton Gin.-A. L. Prudhomme is reported as to erect a cotton gin.

Brasly Landing-Paper Mill.-H. L. Laros will, it is reported, add machinery to his Sinclair sugar factory to utilize the bagasse for the manufacture of paper.

Bulah-Cotton Gin.-A. F. Cookfield will, it is reported, erect a cotton gin.

New Orleans-Manufacturing.-The Anglo-American Real Estate & Improvement Co. has amended its charter, securing the right to manufacture.

New Orleans-Oil Mill.-The Standard Cottonseed Oil Co. has been incorporated with C. M. Soria, president, and J. S. Rainey, vice-president, to erect a cotton-seed oil mill. The capital stock is \$50,000.

New Orleans-Oil Mill.-Charles Lauga is reported as organizing the Farmers' Cottonseed Oil Extractor Co. to establish a mill to manufacture cottonseed oil by a process of which he is the inventor.

Plaquemine-Electric-light Plant and Water Works.-An electric-light plant and water works are reported as being negotiated for.

Ruston-Cotton Compress.-It is stated that a cotton compress will be erected.

New Orleans-Brewery.-The Jackson Brewing Co. has been organized with Herman Schurr, president, and Charles Rieder, vice-president, to erect the brewery recently mentioned. It has purchased a site bounded by Decatur, St. Peter, Jefferson and Clay streets, and will soon commence work on buildings.

## MARYLAND.

Baltimore-Tool Factory.-C. A. Strasser, E. T. Wille and Ernest Stoffregen have formed a partnership under the name of Strasser & Co. to manufacture tools.

Baltimore-Block Factory.-J. S. White & Co. will rebuild, as soon as possible, their block factory reported in this issue as burned.

Boonsboro-Flour Mill.-J. A. Nicodemus is reported as to probably erect a flour mill.

Catoctin Furnace.-L. R. Waesche is now developing an iron mine, as lately reported (under Mechanicstown).\*

Dorsey-Land.-W. A. Morin, L. O. Green, Edwin Warfield, of Baltimore, and others have incorporated the Lennox Park Land Co., purchased 52 acres of land for \$35,000, and have, it is reported, laid off same into building sites.

Laurel-Electric-light Plant.-M. W. Chollar will erect the electric-light plant mentioned in last issue within the next six months, and has not purchased machinery yet.

North East-Rolling Mill.-The McCullough Iron Co., mentioned in last issue, contemplates putting in 3 or 4 new boilers of 150 horse-power capacity.

## MISSISSIPPI.

Byhalia-Gin and Grist Mill.-Kerby & Co. are reported as erecting cotton gin and grist mill.

Corinth-Electric-light Plant.-R. P. Bainhill contemplates erecting an electric-light plant.

Natchez-Box Factory and Saw Mill.-It is reported that a box factory and saw mill will be erected.

Vicksburg-Cotton Factory.-Efforts are being made to organize a \$200,000 stock company to erect a cotton factory.

## NORTH CAROLINA.

Carthage-Distillery.-A. C. Kelley & Co., previously reported as erecting a turpentine still, will, it is stated, erect another.

Cary-Buggy Factory.-Marcom, Cooke & Co. have erected a buggy, cart and wagon factory.\*

Charlotte Land.-E. D. Latta, E. K. P. Osborne, Dr. M. A. Bland and others are the organizers of the \$150,000 stock company mentioned in last issue as to purchase and improve land. The company has bought 263 acres of land and will lay off in town lots and otherwise improve.

Charlotte-Land.-W. N. Failing, representing Northern parties, is reported as optioning 426 acres of land adjoining the city.

Charlotte-The Charlotte Investment & Improvement Co. has been incorporated with a capital stock of \$50,000 to deal in real estate.

Charlotte-Marble Works.-The North Carolina Granite Co., W. McGregor, of Monongahela City, Pa., secretary, is the purchaser of the granite quarries near Mooresville, and will develop and erect marble works in Charlotte, as stated.

Danbury-Iron Mines.-It is reported that arrangements have been made for opening the iron mines on the properties of J. M. Heck and Richmond Pearson.

Durham-Tobacco Factory.-Efforts are being made to establish the plug tobacco factory mentioned in last issue with a capital stock of \$250,000. S. F. Tomlinson can give information when anything definite is done.

Henderson-Bottling Works, &c.-The Shocco Springs Co. is the company reported in last issue as organized to improve the Shocco Springs property and bottle the mineral water.

Hendersonville-Gold Mine.-It is probable that a gold mine will be developed on the land of J. D. Corn.

Kinston-Paper Bag Factory.-Louis Einstein contemplates starting a paper bag factory.\*

Marion-Iron Mines.-The Old North State Land Co. is reported as developing iron ore lands.

Mooresville-Granite Quarries.-The North Carolina Granite Co., mentioned in this issue (under Charlotte), will develop granite quarries near Mooresville.

New Berne-Ice Factory.-Watson & Daniels will, it is reported, establish an ice factory.

Oxford-Snuff Mill.-Negotiations are being made, it is stated, by the Oxford Land Improvement & Manufacturing Co. for the removal of a snuff mill to Oxford.

Raleigh-Canning Factory.-The board of trustees of the Agricultural and Mechanical College will, it is reported, erect a canning factory.

Shelby-The Shelby Land & Improvement Co. has been incorporated with W. P. Love, president; S. J. Green, treasurer, and C. E. Frick, secretary, to deal in real estate, etc. The capital stock is \$25,000.

Thomasville-Flour Mills.-J. A. Kennedy is reported as to put new machinery in his two flour mills.

Waynesville-Land.-A company has purchased 30 acres of land and will lay off in town lots.

Waynesville-Insulator Pin Factory.-It is stated that arrangements are being made for the erection of another insulator pin factory; G. D. S. Allen can give information.

Winston-Tobacco Factory.-Edmunds & Gilmer are erecting a tobacco factory, five stories, 50x150 feet, as lately reported.\*

Winston-Tobacco Factory.-Griffith & Bohannon have awarded contract to Fogle Bros., of Salem, for the erection of a four story brick tobacco factory 53x133 feet.

## SOUTH CAROLINA.

Charleston-Phosphate Mines.-John Hertz, J. E. Bailey and J. F. Warren have formed a partnership under the name of Hertz, Warren & Bailey to develop phosphate mines.

Charleston-Envelope and Paper Bag Factory, &c.-W. F. Lucas, W. H. Richardson, G. S. Holmes and others have incorporated the Lucas & Richardson Co. to manufacture brooms, envelopes, paper bags, etc. The capital stock is \$50,000.

Cheraw-Furniture Factory, &c.-W. H. Nisbet contemplates erecting furniture and spoke and handle machinery.\*

Chester-Fertilizer Factory and Oil Mill.-Efforts will probably be made by the Farmers' Alliance to organize an oil mill and fertilizer company.

Darlington-Water Works.-The Darlington Water Works Co. is the name of the company previously reported as being organized to construct water works.

Darlington-Canning Factory.-A. A. Howlett, of Syracuse, N. Y., and C. S. Nettles, of Darlington, previously reported as to erect a canning factory have incorporated the Champion Canning Co.-The capital stock is \$10,000.

Greenwood-Manganese Mine.-Andrew Stockman has, it is stated, arranged for the development of a manganese mine on his property by Chicago parties.

Latta-Saw Mill.-James Norton has purchased machinery to rebuild his saw mill, lately reported as burned, and contemplates putting in additional machinery in the near future.

Lawrence-Oil Mill and Fertilizer Factory.-The Lawrence Oil & Fertilizer Co., lately mentioned as to erect a ginnery, has increased capital stock to \$30,000.

Lexington-Gin.-W. J. Assman will erect a cotton gin.\*

Marion-Iron and Wood Works.-The Marion Iron & Wood Works, lately mentioned, has commenced the erection of an L-shaped building 120x40 feet and 100x40 feet.

Orangeburg.-The Orangeburg Investment Co. has been organized with G. W. Brunson, president, and P. T. Hildebrand, secretary.

Orangeburg-Cotton Factory, &c.-A \$100,000 stock company is reported as being organized to erect a cotton factory, cotton gins, grist mills, etc.

Spartanburg-Iron Foundry.-Beard & Son, of Greenville, will, it is reported, erect an iron foundry in Spartanburg.

Sumter-Cotton Compress.-A. K. Clark, Neil O'Donnell, W. M. Graham and others have incorporated the Sumter Compress & Warehouse Co. to erect the cotton compress previously mentioned. The capital stock is \$30,000.

Walhalla-Quarrying.-C. Maybaw, of Columbia, recently mentioned, will develop shale.\*

## TENNESSEE.

Blountville-Iron Mine.-J. I. Cox, of Bristol, is developing iron ore land.

Bristol-Ice Factory.-It is stated that a stock company has been organized to erect another ice

factory. John Keys can probably give information.

Camden-Mills.-S. H. Lockhart, of Greenbrier, will, it is reported, move his mills to Camden, erect new buildings and add new machinery.

Cardiff-Iron Furnace.-It is stated that the Cardiff Coal & Iron Co. has broken ground for the erection of its iron furnace previously mentioned.

Clarksburg-Brick yard.-W. A. Settle put new machinery in his brick-yard, doubling capacity, as lately reported.

Collierville-Manufactory.-Dr. McKinney is reported as organizing a \$30,000 stock company to manufacture his patent milk and butter extractor.

Daisy-Coal Mines.-J. G. Aydelott, of Tallahoma, purchased the Daisy coal mines, including about 10,000 acres of land, as reported in last issue.

Dayton-Iron Furnace.-The Dayton Coal & Iron Co. has shut down its No. 2 coke iron furnace for repairs.

Dayton-Iron Foundry.-Samuel Croxton, of Cleveland, O., is investigating with a view of establishing an iron foundry.

Dunlap-New Industries, etc.-The London & New York Land Co. has been organized. It owns 2,000 acres of land and has, it is stated, secured the location of several industries.

Greeneville-Tobacco Factory.-J. R. Boyd and others contemplate erecting a large plug tobacco factory.

Johnson City-Street Improvements, &c.-The city will vote on the issuance of \$50,000 of bonds for streets and schools.

Johnson City-Pantaloons Factory.-J. H. Carlile and W. H. Litsey, of Lebanon, Ky., have organized the Jeans Clothing Manufacturing Co. to start a pantaloons factory.

Johnson City-Marble Works.-The Johnson City Marble Works has been chartered at Nashville and will erect marble works in Johnson City.

Johnson City-Bottling Works.-W. J. Graham will, it is reported, establish bottling works.

Kimball-Land.-H. L. W. Lawsen has, it is reported, purchased 240 acres of land from James Allen for \$85,000.\*

Knoxville-Planing Mill.-Wallace & Willing have, it is reported, established a planing mill.

Knoxville-New Town, &c.-The Cherokee Land Co. has been incorporated by Zanesville (O.) parties and others, with C. J. Williams, of Knoxville, as president, purchased 569 acres of land near Knoxville, and will, it is reported, improve same, lay off a new town, construct water works and sewerage system, macadamize streets and build a bridge across the Tennessee river. The company will have a capital stock of about \$500,000.

Knoxville-Tobacco Factory.-W. C. McCoy & J. A. Hensly have organized the Knoxville Tobacco Co. and erected a factory 50x185 feet.

Lawrenceburg-Cigar Factory.-M. Selle, of Cincinnati, Ohio, will shortly move his cigar factory to Lawrenceburg.

Lawrenceburg-Barrel Factory.-James Garrett & Co. will erect a barrel factory.

Lenoirs-Brick-yard.-It is stated that a company will start a brick-yard.

Lewis County-New Town, etc.-G. W. Hayes, of Columbia, has sold 30,000 acres of land to Chicago parties who expect to lay off a new town and erect a canning factory, saw mill and tobacco factory.\*

Maryville-Knitting Factory.-Arrangements are about completed for the erection of a knitting factory by A. G. Sells, of Kankakee, Ill., and others.

Maryville Electric-light Plant.-The erection of an electric-light plant is contemplated.

Maryville-Nail Factory.-A. P. Thompson will, it is stated, establish a wooden nail factory.

Memphis-Grain Elevator.-The Kentucky Central Railroad Co. (office, Cincinnati, Ohio) will rebuild the grain elevator referred to in last issue. The Keystone Lumber & Improvement Co., of Bogue Chitto, Miss., mentioned in connection with elevator, have contract for furnishing lumber.

Nashville-Sewer.-The Board of Public Works has decided to construct a trunk sewer on the western slope of the city at a cost of about \$75,000.

South Pittsburg-Rolling Mill.-Barry Coleman and others, of St. Louis, Mo., are reported as to build a \$150,000 rolling mill in South Pittsburg.

Troy-Flour Mill.-W. J. Myers & Bro., of Princeton, Ky., will probably increase the capacity of their Troy flour mill.

Tullahoma-Saw Mill.-A new saw mill is reported as to be erected.

Union City-Spoke Factory.-B. H. Bransford, recently reported as to build a spoke factory, will erect a two-story building 72x112 feet for same at a cost of \$15,000.

## TEXAS.

Austin-Dam.-It is stated that site has been secured for the construction of the dam previously mentioned.

Austin-Dam, &c.-Mr. Wooley, Jr., of San Antonio, has, it is reported, purchased the old Robb property of 48 acres of land, and will improve same, construct an artificial lake and build a dam.

Beeville-Brick-yard.-Mr. Stout, of Cuero, has, it is reported, started a brick-yard.

Claude-Brick-yard.-A brick yard will, it is reported, be established.

Dallas-Publishing.-The Ford Bros. Publishing Co. has been incorporated to publish the Texas Commercial.

Denison-Bottling Works.-R. S. Crohn, representing the Ferd Heim Brewing Co., of Kansas City, Mo., has, it is reported, purchased site and will erect bottling works and cold storage plant.

Denton-Water Works.-W. H. Camp, of Gainesville, will construct water works, as previously reported.\*

Dublin-Canning Factory.-The Dublin Canning & Manufacturing Co. has been organized with R. W. Turner as president; J. J. McElmore, vice-president, and A. W. Kinsen, secretary, to establish the canning factory previously mentioned.

El Paso-Coal Mine.-J. F. Berry is opening a coal mine.

El Paso-Saddlery.-The El Paso Saddlery Co. has been incorporated with a capital stock of \$10,000.

Fannin-Cotton Gin.-The Fannin Gin Association has been incorporated.

Fort Worth-Brewery.-It is stated that the necessary bonus of \$10,000 has been secured for the erection of the brewery previously mentioned, by J. J. Gannon and associates, of Dallas, at a cost of \$150,000.

Fort Worth-Land.-The Chamberlin Investment Co. has, it is reported, purchased 164 acres of land at Arlington Heights for \$58,400.

Fort Worth-Land.-T. J. Hurley has, it is reported, purchased 578 acres of suburban land for \$148,200.

Frost-Water Works.-It is stated that a stock company has been organized to construct water works.

Galveston-Tinware Factory.-It is stated that a \$100,000 stock company will be organized to erect a tinware factory.

Gonzales-Brick Works.-The Sunset Brick & Tile Co. will erect brick works, as stated in last issue.\*

Henrietta-Artesian Well.-Bids for sinking an artesian well will soon be advertised for. The mayor can be addressed.

Houston-Creosoting Works.-The Southern Pacific Co. will, it is reported, erect creosoting works near Houston.

Houston-Brick and Tile Works.-C. L. Wortham, H. T. D. Wilson and others have organized a stock company to establish brick and tile works.

Kilgore-Saw and Planing Mill.-W. P. Martin, Jr., will, it is reported, erect a saw and planing mill to be two stories, 80x250 feet, and cost \$25,000.

McGregor-Gin.-Johnson & Kirkpatrick, lately mentioned, are erecting a cotton gin.

Prospect-Gin.-A. Riesel & Co. have erected a cotton gin.

San Antonio-Electric-light Plant.-The San Antonio Gas Co. purchased the plant of the San Antonio Electric Light & Power Co., as reported in last issue, and is remodeling same.

Seymour-Brick-yard.-It is stated that another brick-yard has been established.

Spring Branch-Broom Factory.-Williamson & Fondella have, it is reported, established a broom factory.

Stephenville-Ice Factory.-It is stated that an ice factory will be erected.

Sulphur Springs-Sewerage System and Water Works.-Kellogg & Thompson, of Denison, have received contract to construct the sewerage system and water works mentioned in last issue.

Terrell-Ice Factory.-It is rumored that another ice factory will be erected.

Valley Mills-Cotton Gin.-E. A. Wilson, of Bogue county, is reported as to erect a cotton gin near Valley Mills.

Velasco-Land.-It is stated that 2,400 acres of land near Velasco has been purchased for \$24,000.

Waco-Street Improvements.-The city contemplates the issuance of \$100,000 of bonds for street improvements. The mayor can give information.

Waco-Water Works.-The Waco Water & Power Co. is reported as extending its mains.

## VIRGINIA.

Basic City-Iron Furnace.-Z. T. Henry has, it is stated, received contract for the construction of the iron furnace previously reported as to be built by the Basic City Mining, Manufacturing & Land Co.

Basic City-Match Factory.-The Basic City Match Factory Co. has been organized with J. A. Bumgardner, president; M. D. Miller, vice-president, and W. P. Boyer, secretary, to establish the match factory previously mentioned. The capital stock is \$10,000.



Berkley—Land.—The Chesapeake Land Co. has been chartered with Foster Black, president; William Pannill, vice-president, and A. Martin, secretary. The capital stock is to be not less than \$15,000 nor more than \$50,000.

Big Stone Gap—Coke Ovens.—The Virginia Coal & Iron Co. has, it is stated, awarded contract for building the coke ovens previously mentioned.

Blacksburg—Marble Quarry.—Jeremiah Davis, of Roanoke, has secured control of the black marble quarry on the farm of Dr. Henry Ribble, near Blacksburg, and will probably develop.

Buena Vista—Ice Factory.—A stock company will probably be organized to erect an ice factory. The Buena Vista Co. can give information.

Charlottesville—Woolen Mill.—S. B. Woods, general manager of the Charlottesville Development Co., writes that the woolen mill to manufacture ladies' cloakings, lately referred to, will be erected.

Claremont—Broom and Lath Factory.—A broom and lath factory is reported as established.

Danville—Trunk Factory.—W. P. Averett is endeavoring to secure the location of a trunk factory.

Fincastle—Land.—The Mont Joy Land Co. has been organized with William Smithdeal, of Salisbury, N. C., president; S. H. Hoge, of Radford, vice-president, and E. J. McCulloch, of Buchanan, secretary. The company owns 198 acres of land and has a capital stock of \$25,000.

Hamilton—Land.—The Paeonian Springs Co. has been organized with M. J. Wine as president, and Yardley T. Brown secretary, purchased the Milton and Boyd farms and will lay off same into town lots.

Iron Mound—Iron Land.—J. Q. Dickerson, of Charleston, W. Va., has, it is stated, purchased the Iron Mound property for \$12,000.

Ivanhoe Furnace—Zinc Furnace, etc.—The Ivanhoe Zinc Co. has, it is reported, purchased and is developing zinc lands and will erect zinc furnaces.

Ivanhoe Furnace—Brick Works and Planing Mill.—It is stated that a planing mill and brick works will be erected. The Ivanhoe Land & Improvement Co. can give information.

Low Moor—Land.—J. T. Ellyson and J. B. Elam, of Richmond; John McQuaide, W. H. Fowle and others have optioned the Frank Karnes property, which includes, it is stated, timber and iron ore land, and expect to organize a land company.

Manassas—Flour Mill.—J. Stover contemplates the erection of a roller flour mill.

Martinsville—Tobacco Factory.—It is reported that a large tobacco factory will be erected.

New Castle—Brick-yard.—Samuel Bayne will, it is stated, start a brick-yard.

Norfolk—Land.—The Chesapeake Land Co. has been incorporated with Foster Black as president, William Pannell, vice-president, and A. H. Martin, secretary.

Radford—Iron Furnace.—The Radford Crane Iron Co., previously reported as incorporated by the legislature, is organized with H. W. Hazard, president, and W. S. Pilling, secretary, to build an iron furnace. Frank C. Roberts, of 4th and Chestnut streets, Philadelphia, Pa., is the engineer in charge of construction. Work is to commence at once.

Radford—Rolling Mill, etc.—The Townsend-Hoopes Manufacturing Co., of Philadelphia, Pa., will erect a rolling mill and works for the manufacture of bolts, nails, etc. David Townsend is president, and Herman Hoopes, secretary, of the company which expect to erect a plant to employ 300 hands.

Richmond—Bottling Works.—The Darley Park Brewing Co., of Baltimore, will establish bottling works, as stated in last issue.

Richlands (P. O. Cedar Bluff)—Pipe Works.—F. J. Kimball, J. H. Dinger, H. S. Grove and others have organized the Richland Tube Works to build the pipe works previously mentioned. The capital stock is \$500,000.

Roanoke—Bridges.—J. A. McConnell will receive bids until August 4th for constructing approaches to overhead bridges at Randolph, Henry and Park streets.

Roanoke—Cigarette Machine.—It is stated that G. W. Palmer, of Saltville; W. A. Carpenter, of Lynchburg; F. D. Kemp and others have organized a \$300,000 stock company to place on the market the Robert Hardie patent cigarette machine.

South Boston—Land.—The South Boston Land Improvement Co., previously mentioned, has closed its option on the Alexander Brice property of 600 acres.

Staunton.—E. L. Edmundson, of Richmond, purchased the Seawright Lithia Spring property, as stated in last issue, and contemplates improving same.

Sturgeon Point—Brick and Terra-cotta Works. A Norfolk company has, it is reported, started brick and terra-cotta works.

Tacoma (P. O. Big Stone Gap)—Brick-yard.—C. E. Bibbs will start the brick-yard mentioned in last issue.

Wavnesboro—Brick-yard.—R. J. Mason will establish the brick-yard lately mentioned.

Woodstock—Flour Mill.—It is reported that M. V. French will erect a 50 barrel roller flour mill.

#### WEST VIRGINIA.

Barnesville (P. O. at Fairmont) Bottle Factory.—It is stated that a stock company will be organized to establish a bottle factory.

Belmont—Oil Wells.—E. D. J. Bond, A. G. Clark, Z. T. Taylor and others have incorporated the Taylor Farm Oil Co., purchased the Taylor farm of 40 acres and will sink oil wells.

Benwood—Steel Plant.—The Wheeling Steel Works, of Wheeling, will, it is reported improve and increase the capacity of its steel plant in Benwood.

Ceredo—Powder Mill.—A Mr. Kellogg, of New York, is said to be interested in the project to erect the large powder mill referred to in last issue.

Charleston—Gas, Oil and Salt Wells.—W. H. Montelius, of Mt. Carmel, Pa.; J. E. Hall, of Somerset, Ohio; H. P. Helwig and others have chartered the Elk Valley Oil Co. to sink gas, oil and salt wells.

Davisville—Oil Wells.—The Zanesville Oil Co. is sinking two oil wells.

Fairmont—Coal Mines.—J. E. Watson has, it is reported, purchased the coal privilege of the West Fairmont & Consolidated Gas Coal Co. for \$20,000.

Huntington—Brewery.—It is rumored that a stock company will be organized to erect a brewery.

Martinsburg—Woolen Factory.—It is stated that a \$30,000 woolen factory will be established.

Palatine—Creamery.—N. D. Helmick, L. P. Watson and others will, it is reported, establish a creamery.

Parkersburg—Wire nail Factory.—J. B. Hastings, of Toledo, Ohio, will, it is reported, organize a stock company to erect a wire nail factory.

Ravenswood—Ice Factory.—M. C. McCoy will probably organize a stock company to erect an ice factory.

Sistersville—Gas Well.—The Natural Gas Co. will sink an oil well.

St. Albans—Factory.—The Lindsey-Cochran Manufacturing Co. has been incorporated with a capital stock of \$3,500.

Wheeling—Wells.—W. H. Anderson, A. S. Harden, E. Hervey and others have incorporated the Hervey Bros. Oil Co.

#### BURNED.

Baltimore, Md.—The livery stable of Griffin & Manion. It will probably be rebuilt.

Baltimore, Md.—The block factory of J. S. White & Co.

Beaufort, S. C.—The storehouse of the Coosaw Phosphate Mining Co.

Burkeville, Va.—The tobacco warehouse of Hon. W. E. Gaines.

Cannellton, Ky.—The Cannellton Wrapping Paper & Paper Bag Mills; reported loss \$10,000.

Denton, Texas.—The grain elevator of H. M. Spalding; reported loss about \$10,000.

King and Queen C. H., Va.—The saw mill of Charles Bland; loss about \$2,000.

Louisville, Ky.—The whiskey distillery of the Allen-Bradley Co.; estimated loss \$100,000.

New Orleans, La.—The warehouses of the Standard Oil Co.; loss estimated at \$20,000.

New Orleans, La.—The saw and planing mill of J. A. Blaffer & Co.; reported loss \$25,000.

Tallahassee, Fla.—The saw mill of George White & Co.

Thibodaux, La.—The rice mill of Bush & Williams.

Troy, Ala.—The buildings of W. J. Henderson, E. G. Chaffin, E. A. Joddy & Co., the Troy Messenger, Henry Folmar and others; loss estimated \$75,000.

Troy, Ala.—The Troy Iron Works.

Vicksburg, Miss.—The cotton gin of D. H. Alverson.

REPORTS from various counties in North Carolina on the condition of the cotton crop up to June 27 show that from 5 to 6 per cent less cotton has been planted than last year, but the condition is about 44 per cent better than last year. The crop is two or three weeks earlier.

J. A. SMITH, Anthony, Fla., wants the address of Eastern lumber dealers.

## Building Notes.

Ablene, Texas.—Eleven stone houses, one opera-house and a livery stable are being erected at an entire cost of \$110,000. Cameron & Phillips can give information.

Accomac C. H., Va.—The Baptists will, it is stated, erect a church.

Alexandria, Va.—Rev. C. H. Howard, 710 Princess street, is said to want plans for the erection of a church to cost about \$15,000.

Arkadelphia, Ark.—The Arkadelphia Methodist College has been incorporated by J. McLachlan, R. H. Featherston and others, and will, it is stated, soon erect a building to cost about \$30,000.

Atlanta, Ga.—John V. Bishop has, it is reported, secured contract for the erection of two school-houses, previously mentioned, to cost \$14,000 each.

Atlanta, Ga.—Frank P. Rice is reported as contemplating the erection of a residence to cost \$16,000.

Atlanta, Ga.—J. D. Jervis & Co., of Decatur, Ala., has been awarded, it is stated, the contract for certain specified work on the U. S. Government arsenal at Atlanta.

Atlanta, Ga.—Plans are to be prepared for the erection of an addition to the West End Academy. Burgess Smith can give information.

Atlanta, Ga.—Elfrick & Bro., of New York City, will, it is said, prepare the plans for the opera-house previously reported as to be erected by L. de Give.

Baltimore, Md.—Weyforth Bros. intend erecting a business block to cost \$15,000; Wm. Leach, a store building to cost \$7,500; the Independent Order of Colored Odd Fellows, a building to cost \$15,000; the Riverside Baptist congregation, a church to cost \$11,000.

Baltimore, Md.—Griffin & Manion will, it is stated, rebuild their stables reported in this issue as burned.

Baltimore, Md.—George Archer has prepared plans for the erection of a church to be built by the Central Presbyterian congregation; cost \$20,000. Rev. E. E. Weaver can give information.

Baltimore, Md.—Albert S. Brown has secured contract for the erection of the Annex School No. 13, his bid being \$20,208.

Birmingham, Ala.—P. B. Clarke is said to contemplate erecting a business block.

Birmingham, Ala.—The time for receiving proposals for the erection of the First M. E. Church, South, lately mentioned, has been extended to July 26. Address Wm. Hood, 3d avenue and 20th street.

Birmingham, Ala.—The Georgia Pacific Railway Co. proposes to erect a round-house, storehouse and wood-machine shop, mentioned elsewhere in this issue.

Brownwood, Texas.—Poole & Stagg, of San Angelo, have secured contract for the erection of the boarding house for the Howard Payne College, previously mentioned. Their bid was \$5,000.

Brunswick, Ga.—S. C. Caldwell will erect the buildings mentioned last week for his college, formerly known as the Rome Female College of Rome. It will now probably be called the Sea Side Seminary.

Buchanan, Va.—It is reported that the Virginia Real Estate & Investment Co., of Lynchburg, will erect \$40,000 of buildings.

Buena Vista, Va.—The Virginia Real Estate & Investment Co., of Lynchburg, mentioned above, will, it is reported, erect \$40,000 of buildings.

Carrollton, Ga.—It is stated that Burnes & West and Hannick & Crider will each erect a brick building.

Charlotte, N. C.—The Charlotte Auditorium Co. has been organized for the purpose of erecting the auditorium lately mentioned; capital stock \$15,000. George B. Hanna, chairman pro tempore, can give information.

Clifton Forge, Va.—B. F. Partlow has contract, it is said, for erecting the building for the Clifton Forge Seminary.

Columbus, Ga.—It is stated that several large State buildings will be erected on the Alabama Warehouse property. The Muscogee Real Estate Co. can give information.

Columbus, Ga.—A. M. Brannon and others, of the building committee, will receive bids until July 18 for the erection of the new building, alterations and improvements for St. Luke's church, lately referred to.

Columbus, Miss.—Connally & Curtis contemplate erecting a cold-storage warehouse.

Coushatta, La.—A branch of the New South Building & Loan Association of New Orleans has been organized with Paul Lisso, president, and Edward Lisso, secretary.

Florence, Ala.—George P. Arthur will, it is reported, erect a building.

Fort Payne, Ala.—W. P. Rice is remodeling his opera-house.

Fort Worth, Texas.—It is reported that the Texas Spring Palace, lately reported as burned, will be rebuilt.

Frederick, Md.—Plans have been prepared for the erection of a new depot by the Baltimore & Ohio Railroad Co. (office, Baltimore).

Glade Spring, Va.—Haney & Wilson, of Belmont, Tenn., have, it is said, secured contract for erecting an addition to the Southwest Virginia Institute.

Greensboro, N. C.—Hotel &c.—It is rumored that a Northern syndicate has purchased property near Greensboro, and will erect a hotel, pavilion, etc.

Harriman, Tenn.—The Harriman Building & Loan Association has been organized; capital stock \$500,000.

Henderson, N. C.—Hotel.—The Shocco Springs Co., mentioned elsewhere in this issue, will erect a hotel and a number of cottages. D. V. Cooper, president, can give information.

Henrietta, Texas.—Squires & Roach confirm the report lately referred to that they have contract for erecting the county jail; also the contract for erecting a two-story brick building, 60x110 feet, for Hon. A. K. Swan; a two-story store building for P. M. Stone, and a brick school-house to cost \$28,000.

Huntsville, Ala.—A building will, it is reported, be erected for the Alabama Military Academy.

La Grange, Texas.—Martin, Byrne & Co., of Colorado City, have, it is reported, secured contract for erecting the Fayette county courthouse lately referred to.

Little Rock, Ark.—W. D. Holtzman has contract for remodeling the building to be occupied by the Press Printing Co.

Marshall, Texas.—John B. Carter, chairman building committee, writes that the church lately mentioned as contemplated by the Baptist congregation will cost about \$10,000.

Meridian, Miss.—Hotel.—George S. Covert confirms the report lately mentioned that he has contract for erecting the Southern Hotel. He has also commenced the erection of two large brick store buildings.

Monticello, Ark.—R. T. Hyatt intends erecting a store and bank building to cost \$7,000.

Monticello, Ark.—Professor Hineman will probably erect a schoolhouse to cost \$5,000.

Newport, Ark.—Hotel.—A. B. Smith will probably erect a hotel to cost \$5,000.

Obion, Tenn.—The Union City Flouring Mill Co. is, it is stated, erecting a large warehouse.

Oxford, N. C.—The Independent Order of Odd Fellows will, it is reported, erect a hall to cost \$10,000.

Richmond, Va.—The Darley Park Brewing Co. of Baltimore, Md., will erect a storage house.

Roanoke, Va.—The Virginia Real Estate & Investment Co., of Lynchburg, will, it is stated, erect \$40,000 of buildings and a bank and office building to cost \$80,000.

Rockingham, N. C.—James A. Wright & Bro. contemplate the erection of a brick store building with iron front.

Rockingham, N. C.—Hotel.—The Rockingham Drug Co., previously referred to, will, it is stated, erect a hotel.

Rome, Ga.—The Rome Fire Insurance Co. will erect the building lately reported as to be erected jointly by the Rome Fire Insurance Co. and the Bradford Drug Co.

Sheffield, Ala.—The secretary of the Sheffield Light Guards can give information concerning the erection of the \$12,000 club-house lately reported.

Statesville, N. C.—Demens & Harding, of Asheville, confirm the report of last week that they have secured contract for erecting the U. S. public building at Statesville.

Tarpon Springs, Fla.—Hotel.—The Occidental Land Co. will, it is stated, enlarge its hotel lately purchased.

Texarkana, Texas.—J. M. Brown, of Camden, Ark., has secured, it is stated, the contract for erecting the United States public building lately referred to.

Uniontown, Ala.—A warehouse is being erected.

Washington, D. C.—W. B. Moses & Sons will erect a stable and warehouse to cost \$15,000—contract let to J. H. Howlett; J. T. Varnell, 7 dwellings to cost \$30,000; Mary N. Shaefer, a dwelling to cost \$9,000; Louis W. Perkins, a two-story brick dwelling to cost \$6,500; Miss L. Byrne, a three-story dwelling to cost \$6,000; Miss G. D. Mitchell, a dwelling to cost \$40,000; Mrs. Mary Atkins, three dwellings to cost \$7,800; Wm. Walters' Sons, a four-story warehouse to cost \$6,000; A. C. Tyler, a residence to cost \$40,000; James Towney, a brick dwelling to cost \$7,000; Mrs. John O. Evans, a brick dwelling to cost \$18,000; Robert L. Waring, a brick dwelling to cost \$8,000; Albert Gleason, an office building to cost \$8,000; also 6 dwellings to cost \$40,000; G. T. Wade, a dwelling to cost \$8,000; W. W. Burdette, a store and dwelling to cost \$12,000, also two stores and dwellings to cost \$10,000; Ida Demonet, a brick store to cost \$6,500. Plans have been prepared by James F. Denson for a dwelling to cost \$6,000.

Waynesville, N. C.—Hotel.—Boston (Mass) parties will, it is stated, erect a hotel to cost about \$40,000 on land lately purchased.



## Cultivation of Figs.

Figs flourish in the South. They are enjoyed in their season by men, animals and poultry. They are not cultivated to any extent. Like Topsy, they are not "borned but grewed." This tree, in the South, under all circumstances, is prolific. Its crop seldom fails. In Florida, of late years, some parties have put up fig preserves, which have found a ready sale in Northern and Western markets. It would have been unlimited had the production been sufficient. Within a year or two fresh figs have been seen in some few of the novelty fruit stores that cater to fashionable and wealthy New York families. Aside from these very limited new markets, all figs now grown in the South are either consumed locally or decay.

Meanwhile, this country annually imports dried figs from the Mediterranean in large quantities. The best come from Smyrna in mid-winter. A poorer quality from Aleppo also has a large sale. Nearly all the year round the traveler on American railways has thrust into his lap a little box of dry and almost tasteless figs that he buys simply because none better are obtainable.

The North Carolina Agricultural Experiment Station has taken this matter in hand and has procured cuttings of the best varieties of figs in cultivation in all parts of the world. There are 37 varieties in all. These are being grown at the station for the double purpose of testing their hardiness and quality and for growing cuttings to be distributed in all parts of the State. It is the purpose of the horticultural division of the station to make it of value to the farmers and fruit growers by testing and distributing new plants of special value to the growers of the State. Full directions for fig culture will be given in bulletins hereafter free to all who apply. This experiment station, having commenced this good work, should extend it and tell its fig cultivators how to cure the fruit so as to put it in competition with that which comes from the Mediterranean.

The rumor that the Missouri Pacific and Atchison systems will soon be consolidated seems to have some confirmation in the fact that the latter company has been sending its reports officially to the former for three years. The consolidation of these companies would make a system of over 14,000 miles of road, far the largest in existence. In connection with this report the English journals appear greatly exercised about Mr. Gould, and the London Anglo-American Times refers to him as the "retiring Napoleon" and believes his influence to be dwindling. It goes on further to say that Mr. Gould had hoped to break up the Atchison and pick up the pieces for his Missouri Pacific, but that the Atchison has turned the tables and is playing the active part itself. "The Atchison's success was his Waterloo," asserts the Times, "and, like a prudent general he is, the time to treat was when he had an array so formidable still at his back. It is better for the Atchison to construct a golden bridge for Jay Gould's retreat than to drive him, after a hard-contested struggle, into

the river. It is probable that Gould has surrendered the Southwestern territory to the Atchison." From the manner in which Mr. Gould is building new roads just now in Arkansas and Texas and strengthening his position in every way possible, it does not seem likely that he has surrendered or will retreat across the "golden bridge" at present. The Atchison may secure the Missouri Pacific, but when it does it is safe to predict that Jay Gould will have nearly as much to say about the affairs of the consolidated company as he has now about his own system.

"CONSTRUCTION on the Paducah, Tennessee & Alabama Railroad, which was recently commenced, will be completed for a distance of 65 miles by January. Johnson Bros. & Fraught, of Paducah, Ky., have the contract for grading, bridging, laying track, and entire construction."

The above, from the MANUFACTURERS' RECORD, is a confirmation of our statement of a previous issue, only the road will be graded through Henry county, Tenn., by October 1st, 1890, in order to earn the subscription of that county to the stock of the road, instead of January 1, 1891.—Florence (Ala.) Exchange.

Our statement concerning the road was based from authentic source, the contractors themselves. The following communication is from Johnson Bros. & Fraught, the firm which is building the line:

PADUCAH, KY., June 9, 1890.

We have the contract for building the Paducah, Tennessee & Alabama Railroad from here to Paris (Henry county), Tenn., a distance of 65 miles. We have the entire contract, grading, bridging, tying, laying track and all, to finish by the 1st of January, and turn it over to company ready for rolling stock. Yours respectfully,

[Signed,] JOHNSON BROS. & FRAUGHT.

THE Rockbridge Alum Springs & Goshen Railroad, extending from Rockbridge Alum Springs to Goshen, Va., has been opened for traffic. The road is ten miles in length, and is owned by a stock company composed of James A. Frazier and others. The company was incorporated by the last Virginia legislature.

THE Jacksonville, Tampa & Key West Railroad Co. is reported as having purchased the Sanford & Lake Eustis and the DeLand & St. John's Railroads. The Sanford road is 29½ miles in length, extending from Sanford to Tavares, Fla. The DeLand & St. John's Railroad is 4 miles long, and connects DeLand with the Jacksonville road. Both of these roads have been practically owned by the Jacksonville, Tampa & Key West, but the legal possession of the lines had not been settled until now.

THE Wilmington & Weldon Railroad, early last spring, notified the legislative investigation committee of North Carolina that it would waive the non-taxation privilege of its charter in favor of the State, provided sundry privileges were granted that corporation. The proviso was that the State should allow the company to increase its capital stock to \$10,000,000, to change its name to the Atlantic Coast Line, to buy, lease and own other railroads and rolling stock, to consolidate with other lines it may own, and to exempt it from all town or city taxation. If these privileges are granted, the company further agrees to be taxed on road-bed and rolling stock for State and county purposes not more than 66⅔ cents on the \$100 worth of property; the road-bed to be valued for taxation at not more than \$8,000 per mile, branches not to exceed \$4,000 per mile. This would add to the revenue of the State and the counties through which the road runs about \$25,000 annually. The North Carolina papers say that this proposition has been accepted by the legis-

lative committee, subject to the approval of the General Assembly. Referring to this, the Tarboro Southerner, putting out an anchor to windward, discreetly says: "The conditions upon which this agreement is to be made are extremely favorable to the road. How much it will save by being exempt from municipal taxation we are not informed, but the right to increase capital stock and to buy, lease and run other roads is highly important, and, if attained, will make the Coast Line in a few years one of the most important railroad factors in the entire country, overshadowing even the West Point Terminal of Virginia. It is well, we think, for the State and road to come to some agreement, and we are not disposed to deny the road all due praise for a voluntary submission to taxation, but we are of the opinion that the road will receive for what it surrenders two or more to one."

JUDGE THAYER, of the United States Circuit Court, has ordered the sale of the Missouri and Arkansas divisions of the St. Louis, Arkansas & Texas Railway, and Col. D. P. Dyer has been appointed special master in chancery to sell those divisions. No bid for less than \$2,000,000 is to be considered. It is probable that Judge Pardee, of the Texas judicial circuit, will order the sale of the Texas division of the road next month. The St. Louis, Arkansas & Texas, popularly known as the Cotton Belt Road, is 1,170 miles in length. The main line extends from Bird's Point, Mo., to Gatesville, Texas, a distance of 723 miles. Numerous branches reach Sherman, Fort Worth, Lufkin, Shreveport, Hillsboro and other more or less important railroad centers in Texas and Louisiana. The road reaches St. Louis by the St. Louis, Iron Mountain & Southern, one of the Missouri Pacific lines. The Cotton Belt Road has constructed no new lines for over a year and a-half. Jay Gould and Russell Sage own \$6,000,000 of its second mortgage bonds, which they bought for \$2,000,000 in 1888. S. W. Fordyce and A. H. Swanson are the receivers of this road, and Mr. Fordyce is its president. It is now thought that the line will be sold about October 10.

THE Baltimore & Eastern Shore Railroad Co. has consolidated with the Bay Ridge Railroad, five miles in length, and the Wicomico & Pocomoke Railroad, 31 miles long. This will make a through line from Annapolis to Bay Ridge, across Chesapeake bay and on to Ocean City, Md. In order to make the purchase of these two roads, the Baltimore & Eastern Shore Co. has executed a mortgage on its entire property to the Atlantic Trust Co. of New York city for \$1,600,000 in 5 per cent. bonds, payable in gold at the expiration of 30 years. The Bay Ridge Road and the Chesapeake Terminal Co., the latter owning the terminals on either side of the Chesapeake, and also the transfer steamer James River, all purchased by the Eastern Shore Co., receive about \$150,000 of the bonds in payment for their property, and the Wicomico & Pocomoke about \$220,000. For future betterments on the Wicomico & Pocomoke, \$200,000 of the bonds will be set aside, and \$200,000 is to be used for immediate repairs on the same road. Of the remainder, about \$830,000, \$80,000 will be used in paying off the car-trust bonds of the Baltimore & Eastern Shore Road, and the balance for the completion of the road and for additional equipments. The Wicomico & Pocomoke will be provided with new steel rails, new ties, bridges, etc. The Baltimore & Ohio has extended to the company as consolidated the traffic agreement made with the Baltimore & Eastern Shore, which provides that 10 per cent. of the gross receipts of the latter shall be set aside to make good any possible deficiency of interest on its bonds. The original bonds of the Baltimore & Eastern Shore, which were subscribed for by a New England and Maryland syndicate, will be exchanged for the consolidated bonds, which are secured by first mortgage.

## Southern Banking Progress.

Some of the best proofs of the activity and force of our national growth are visible in the Southern States. The gratifying results with which in Georgia, Alabama, Mississippi and elsewhere the economic energy of our people is utilizing the resources of wealth in which the country is so rich, have often claimed a place in our banking reviews of late. The Macon Telegraph gives an earnest discussion to some aspects of the banking situation, past and prospective, which are both timely and full of wise suggestions. Citing many statistics familiar to our readers, the Telegraph contends that the rapid progress made of late by the national banking system in the Southern States is going on in those sections where the political views of the people have been formerly most adverse to the control of the banks by Federal law. Very soon after the close of the war and the restoration of the blessings of peace and national union, our readers will remember that the development of the national banking system was promoted by laws specially directed to secure to the Southern and Western States a participation in the privileges of circulation. Those banks in the northern and eastern sections of the country which had received more than their fair quota of circulation were required by the statute of July 8, 1870, to surrender the excess.

That there might be no impediment to these expedients for the rehabilitation of the South, fifty-four millions of new bank notes were authorized by that statute, and 25 millions more, as above stated, were ordered to be withdrawn from the States having more than their due proportion. Thus new banks were expected to be called into existence to receive 79 millions of notes, and to subscribe 90 millions or more of capital in such Southern and Western cities as were imperfectly supplied with banking facilities. This new currency of 54 millions of bank notes was apportioned so that Virginia should have \$4,915,985; Kentucky, \$4,651,349; Tennessee, \$4,351,759; Louisiana, \$5,485,193; Mississippi, \$2,980,479; Georgia, \$4,681,728; North Carolina, \$4,098,628; West Virginia, \$457,770; South Carolina, \$4,218,838; Alabama, \$4,081,212; Texas, \$3,032,194; Arkansas, \$1,455,519, and Florida, \$516,442. These aggregates of potential banking relief offered in 1870 to the South were estimated on the population and resources of each State.

It is next explained that the recent close of the war and "the general revival of business of all kinds accounts for the extraordinary number of national bank charters obtained. The fact that the local governments of many of the States were demoralized at that time also had much to do with the general demand for national banks. During the twelve months previous to November 1, 1865, 1,014 national banks, with an aggregate capitalization of \$242,542,982, were organized, but during the next five years the number was less than 70 a year. In 1871 it rose to 170, and in 1872 to 175, but it continued much below those figures until 1882, when 227 national banks, with an aggregate capital of \$30,038,300, were organized. Since that time the number has varied considerably, the highest being 262 in 1883 and the lowest 132 in 1888. The great majority of the national banks organized during the past year have been in the South and West, 161 of them being in States and Territories west of the Mississippi." Among the chief causes of the recent growth of the national banking system we must give prominence to the increase of capital and diversified occupations, the extension of railroads, factories and industrial production, the rapid development of the best elements of prosperity and wealth throughout the South and West, the increasing demand for money in those sections and the unjust burdens which were imposed on State banks in some parts of the country.—American Banker.

# IVANHOE,

## WYTHE CO., VA.

At the Junction of the North Carolina Extension and Cripple Creek Extension of the Norfolk & Western Railroad.

A Great Railroad Junction in the heart of the Greatest Mining District of Southwest Virginia, and destined soon to rank with the Great Industrial Centers of the New South.

## The Ivanhoe Land & Improvement Co.

WILL OFFER AT

**PRIVATE SALE ON JULY 16, 1890,**

*Desirable Business and Dwelling Lots at an*  
**AVERAGE PRICE OF \$275.**

All lots are favorably located on gently rising ground, overlooking the beautiful valley of New river. The exceedingly low price at which these lots are placed upon the market insures to investors

## QUICK AND LARGE RETURNS.

**TERMS OF SALE—One-third Cash, balance in one and two years.**

Through its exceptional railroad facilities, **IVANHOE** is placed within minimum haul of the enormous deposits of "Gossan" iron ore of Carrol county, and the world famous limonite and mountain ores of the Cripple Creek valley, and is also within easy haul of the celebrated Pocahontas and Flat-top coal and coke fields.

## Immense Limestone Quarries

Already being operated within the town.

The **No. 1 Furnace** of the New River Mineral Co. is already in successful operation, while the **Ivanhoe Iron Co.**, under the presidency of Mr. Jordan L. Mott, of the Mott-Haven Iron Works of New York, has been organized for the purpose of erecting another furnace of large capacity.

The **Extensive Mines** of the **New River Mineral Co.**, adjoining the town, are already giving employment to a large number of men.

The **Ivanhoe Zinc Company**, with a capital of **\$500,000**, has purchased immense deposits of valuable zinc ores, which they are now developing, and will soon erect several zinc furnaces.

**Being the Only City** on this Southern connection of the Norfolk & Western Railroad, **Ivanhoe** must become the great distributing point for the immense ore fields and agricultural and timber districts of Southwest Virginia and Western North Carolina.

Situated in the midst of a great wool-raising district, and within a short distance of the Southern cotton fields, no place in Virginia possesses greater advantages for

## WOOL AND COTTON MILLS.

Vast tracts of red and white oak, chestnut, hickory, pine and hemlock, furnish exceptional opportunities for wood-working establishments and steam tanneries.

## A \$35,000 Hotel will be erected at once.

Water Works, Planing Mill, Electric-Light Plant, Brick Works, etc., will be in operation at an early date.

Being 2,000 feet above the sea, the climate is unsurpassed by the celebrated mountain resorts of the world.

A large tract of level land, with a front of  $1\frac{1}{2}$  miles on New river, has been donated for manufacturing purposes.

Liberal inducements will be offered all industries locating here.

Through its connections with the steamship lines; the Louisville & Nashville, the Cape Fear & Yadkin Valley and the Shenandoah Valley Railroads and its outlet on the Ohio River—the Norfolk & Western Railroad—places Ivanhoe in direct communication with the great markets of the North, East, South and West.

For maps, descriptive Pamphlets, etc., apply to the secretary of the company at Ivanhoe, Wythe County, Virginia.

**W. C. VAN DOREN, President.**

**G. M. SEELEY, Secretary and Treasurer.**

### DIRECTORS.

**JORDAN L. MOTT**, of The J. L. Mott Iron Works, Mott Haven, N. Y.  
**CHAS. G. EDDY**, Vice-President of the Norfolk & Western Railroad, Roanoke, Va.  
**EDWIN EINSTEIN**, New York City, capitalist and director in the New River Mineral Company.

**GEORGE H. SEELEY**, New York City, capitalist and president of the New River Mineral Company.

**W. C. VAN DOREN**, Ivanhoe, Va.

**GEN. JAMES A. WALKER**, Wytheville, Va.

**HERBERT G. HULL**, New York City, capitalist and lawyer.

## MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

**Acid Chamber.**—The Cordele Guano Co., Cordele, Ga., wants acid chamber with capacity for 4,000 tons of phosphate per annum.

**Bagging Factory.**—R. F. Burdell, Savannah, Ga., desires information regarding the manufacture of jute and cotton bagging.

**Boiler and Engine.**—S. R. Waesche, Catocin Furnace, Md., will want a boiler and engine.

**Boiler and Engine.**—The Sunset Brick & Tile Co., Gonzales, Texas, wants a 55 horse power boiler and 40 horse-power engine.

**Boiler and Engine.**—The Salem Gas Stove Manufacturing Co., Salem, Va., will purchase boiler and engine.

**Bottling Works.**—The Darley Park Brewing Co., Baltimore, Md., will purchase machinery for bottling works.

**Brick Works.**—The Sunset Brick & Tile Co., Gonzales, Texas, wants brick machinery, dry press, stiff mud and soft mud machines, clay elevators and pulverizers; also brick trucks, etc.

**Buggy Factory.**—Marcom, Cooke & Co., Cary, N. C., want machinery for buggy, cart and wagon factory.

**Cement Mill.**—George K. Anderson, Clifton Forge, Va., wants prices on machinery for grinding 100 barrels of cement per day.

**Corn Mill.**—The Pacolet Manufacturing Co., Pacolet, S. C., will buy a corn mill.

**Cotton Mill.**—The Lexington Manufacturing Co., Lexington, S. C., will purchase machinery for a cotton mill.

**Dynamo.**—The W. Lyon Co., St. Augustine, Fla., wants a small dynamo for electric lighting to be run by two horse power.

**Dynamo.**—W. M. Graham & Co., Cartersville, Ga., wants prices on a dynamo with capacity for from 12 to 16 candle-power lights.

**Elevator, etc.**—Edmunds & Gilmer, Winston, N. C., will want an elevator for a five-story building; also window pulleys and pivots.

**Excelsior Machinery.**—Jackson & Bro., Wetumka, Ala., want catalogues and prices of excelsior machinery.

**Furniture Factory.**—W. H. Nisbet, Cheraw, S. C., wants prices on machinery for manufacturing furniture.

**Gin.**—W. E. H. Searcy, Griffin, Ga., wants a gin for long staple cotton.

**Gin.**—The Pacolet Manufacturing Co., Pacolet, S. C., will purchase a cotton gin.

**Gin, etc.**—W. J. Assman, Lexington, S. C., wants cotton gin press and engine.

**Gins.**—C. T. Trask, Belleview, Fla., wants the address of manufacturers of cotton gins.

**Heating Apparatus.**—John B. Carter, Marshall, Texas, wants prices and information on heating apparatus for church.

**Ice Machine.**—M. C. McKay, Ravenswood, W. Va., wants estimates on ice machinery.

**Ice Machine.**—R. H. Adair, Fort Smith, Ark., wants the address of manufacturers of family ice machines.

**Ice Machine.**—The Cumberland Beverage Works, Joseph Owens, manager, Barboursville, Ky., will want an ice machine.

**Ice Machine.**—George S. Roots, Bessemer, Ala., will want bids on a 15 ton ice machine.

**Ironworking Machinery, etc.**—The Salem Gas Stove Manufacturing Co., Salem, Va., will purchase light machinery for fitting castings, drilling, polishing, etc.; also sheet iron working tools.

**Kiln.**—George K. Anderson, Clifton Forge, Va., wants information and prices on improved kiln for burning cement rock.

**Laundry.**—N. G. N. Walker, Barnwell, S. C., wants prices on outfit for a small steam laundry.

**Laundry.**—J. N. Johnson, 154 South Broad street, Savannah, Ga., wants prices and description on complete outfit for steam laundry.

**Locomotive.**—The Enterprise Land & Improvement Co., Fayetteville, N. C., will purchase a Shay engine for tram-road.

**Nickel Plating Plant.**—The Salem Gas Stove Manufacturing Co., Salem, Va., will purchase a nickel plating plant.

**Paper Bag Factory.**—Louis Einstein, Kingston, N. C., wants estimates on machinery for making paper bags; also information about the business.

**Peanut-cleaning Machinery.**—E. C. Werrell, Murfreesboro, N. C., wants the address of manufacturers of peanut-cleaning machinery.

**Planer.**—The Pacolet Manufacturing Co., Pacolet, S. C., will purchase a planer.

**Planer, Surfacers and Table Saw.**—W. E. H. Searcy, Griffin, Ga., wants surfacer and planer and an adjustable iron leaf table saw.

**Planing Mill.**—McCauley, Stillwell & Co., Savannah, Ga., want the address of parties furnishing machinery for planing mill purposes.

**Quarrying Plant.**—C. Mayhew, Columbia, S. C., wants rip and gang saws, channeller, derricks, etc.

**Railroad Building.**—Charles F. Nelson, Winchester, Va., desires to correspond with railroad construction companies concerning the building of a railroad.

**Saw Sharpener.**—R. H. McDermid, Union, S. C., desires the address of the manufacturer of a machine for sharpening cotton gin saws.

**Shingle Mill, etc.**—J. A. Smith, Anthony, Fla., will want shingle mill and belting.

**Shoe Factory.**—George W. Robertson, Box 354, Danville, Va., wants the address of manufacturers of shoe machinery.

**Spoke and Handle Machinery.**—W. H. Nisbet, Cheraw, S. C., wants prices of spoke and handle machine.

**Steam-heating Apparatus.**—W. S. Cox, La Grange, Ga., desires to place contract for steam-heating apparatus for the Southern Female College.

**Steam Heating Apparatus.**—Edmunds & Gilmer, Winston, N. C., will want steam heating apparatus.

**Steel Rails.**—H. G. Damon, Corsicana, Texas, desires to correspond with manufacturers of steel rails.

**Water Works.**—W. H. Camp, Gainesville, Texas, will want two boilers, two steam pumps, stand pipe and mains for water works at Denton, Ohio.

**Woodworking Machinery.**—J. R. Brumby, Marietta, Ga., will want machinery for manufacturing woodworking for agricultural implements, spokes and turned and flat hardwood work of every description.

## Safe Transportation of Perishable Articles.

Interstate traffic in fresh meats, fruits and vegetables has become a business of prime importance. How these perishable articles can be carried from end to end of the country in good condition, without incurring such heavy freight charges as to put them out of reach of general consumers, has long been a problem which the Interstate Ventilator-Refrigerator Car Co., of Atlanta, Ga., seems to have solved.

The Atlanta Constitution, in a lengthy local, describes the system. That company has for some months had running between Florida and Chicago five of its cars, which have successfully met all the requirements of the service, and it has ordered forty-five others, which will soon be completed and put upon the same route.

As the name of the corporation implies, in its cars are combined the two processes of ventilation and refrigeration. When, for instance, oranges are shipped from Florida, they have a degree of internal heat that must be removed by ventilation. When they reach Atlanta the ice chests at the end of the cars are filled, and the fruit is surrounded by a cold, dry atmosphere until near the journey's end. Then, if necessary, ventilation is again employed, so that the temperature within the car shall be the same as that at the destination. By an ingenious system of valves and of winnowing plates all this is accomplished without any trouble from dust or from cinders. The air is kept perfectly pure, all the gases exhaled from meat or fruit being carried off as fast as they arise. Ten thousand refrigerator cars now run on Southern railroads alone. If the cars built on this new plan will accomplish all that is claimed for them, they will largely replace those now in use.

BIRMINGHAM is to have a chamber of commerce building. A committee, of which Mr. B. Steiner of Steiner Bros., the bankers of that city, is chairman, is now engaged in raising subscriptions for that purpose.

*If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.*



# Hercules Ice Machines

FOR

Ice Making, Cold Storage, Packing Houses, Breweries, &amp;c.

Send for our new illustrated circular.

Hercules Iron Works, - - - Chicago, Ill.

## "THE WORLD IS MINE,"

Said Monte Cristo. We are not so avaricious, but we do want a good share of the Black Varnish trade of the United States. Any one who now uses asphaltum or similar blacks will find it to his interest to write and find out about **BONNELL'S NUBIAN IRON ENAMEL**, the cheapest and best black for iron ever made. Quality guaranteed or goods taken back, and will refund you freight, cartage and all charges which a trial has cost you.

### THE NUBIAN IRON ENAMEL CO.

163 Sangamon Street, CHICAGO.

77 Warren Street, NEW YORK.

### WATER POWER UTILIZED.

at any distance from source by **ELECTRICAL TRANSMISSION**. The simplest, cleanest and cheapest to operate for Mining, Street Railways, Electric Lighting and Manufacturing.

**C. S. VAN NUIS,** Constructing Electrical Engineer,  
74 CORTLANDT STREET, NEW YORK.

### RAEDER, COFFIN & CROCKER,

## ARCHITECTS

Rooms 916-919, 218 Lasalle Street, Chicago,

Special Designers of Industrial Plants.

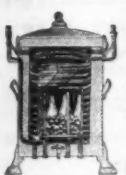
Completely Equipped Shops, Foundries, Warehouses, Cotton and Woolen Mills, Grain Elevators, &amp;c.

HENRY RAEDER, Architect; A. S. COFFIN, B. S. CROCKER, Engineers.

**C. R. MAKEPEACE & CO.**  
ARCHITECTS and MILL ENGINEERS  
PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woolen Mills.



**THE BROUGHTON MIXER**  
FOR  
Wall Plaster and Fertilizers.  
MANUFACTURED BY  
**W. D. DUNNING,**  
96 W. Water St., Syracuse, N. Y.  
SEND FOR CIRCULAR.

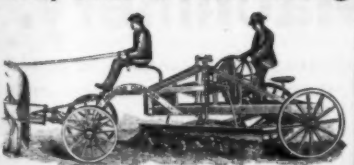


**FAMILY ICE MACHINE**  
Patented. Medal Awarded at Exhibition.  
Making Ice (1 to 18 Cy operation) Ice Cream, Iced Champagne, or to cool water economically.  
PRICE, - \$10.00 to \$185.00.  
SOLE MANUFACTURERS:  
L. Dermigny & Co., 126 W. 25th St., N. Y.

**The BOOMER & BOSCHERT**  
KNUCKLE JOINT  
**PRESS**  
FOR BALING  
Cloth, Paper, Yarn, &c.  
Or for any other purpose requiring great pressure.  
**BOOMER & BOSCHERT PRESS CO.**  
329 W. Water St. Syracuse, N. Y.

**DREW, BALDWIN & CO.**  
COTTON MILL  
Architects and Engineers,  
45 Broadway, New York.

### Money Saved in Street Grading



WRITE

**The Southern Equipment Co.**  
CHATTANOOGA, TENN.

### PROPOSALS.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 23d day of July, 1890, for the iron stairways and iron work of interior finish for the U. S. Courthouse and Postoffice building at Pittsburgh, Pa., in accordance with the drawings and specification, copies of which may be had on application at this office and the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time fixed for opening the same, also bids which do not comply strictly with all the requirements of this invitation. Proposals must be sealed and endorsed "Proposal for Iron Stairways and Iron Work of Interior finish for the U. S. Courthouse and Postoffice building at Pittsburgh, Pa." and addressed to JAS. H. WINDRIM, Supervising Architect. June 28, 1890.

### PROPOSALS FOR MAIL-BAG CORD-FASTENERS.

POST OFFICE DEPARTMENT, WASHINGTON, D. C., May 1, 1890.  
**SEPARATE SEALED PROPOSALS** from patentees or their assignees will be received at this Department until noon on the twenty-ninth day of July, 1890, as follows:  
Proposals for furnishing mail-bag cord-fasteners for use by the Post Office Department: Said proposals to state the amount of royalty, if any, charged for patent device, price at which patent device, if any, will be conveyed to the Government, and also price at which said mail-bag cord-fastener will be furnished complete, including royalty.  
Proposals must be in accordance with the specifications and forms of proposals, which will be furnished on application by letter to the Second Assistant Postmaster General.  
The contracts which may be made will be in conformity to the specifications and the accepted proposals.  
The right is reserved to reject any or all the proposals.  
JOHN WANAMAKER,  
Postmaster General.

### STEIN & SCHWARZ,

323 WALNUT STREET,

— PHILADELPHIA, PA.

General Chemical and Metallurgical Works, Gas Furnaces and Gas Producers. Examination of Mineral Lands. Chemical and Metallurgical Analyses of every description. Chemical Investigations and Reports.

### OTTEN & WESTENHOFF, Analytical & Consulting Chemists.

Chemical Analysis of Iron Ore, Pig Iron, Steel, Limestone, Coal, Mineral Waters, Fertilizers, &c.  
Physical Tests of Iron, Steel and other Building Materials and Lubricating and Illuminating Oils, &c. Examination of Mining Properties.  
Office and Laboratory, 17 W. T-1st St., Cin in atl, O.

### J. H. PRATT, ANALYTICAL CHEMIST & MINING ENGINEER

1826 Third Avenue, Birmingham, Ala.

Chemical Investigations, Analyses of Ores, Slags, Coals, Waters, &c. Reports on Mineral Properties, &c. Correspondence solicited.

### Cotton Seed Oil Mills

We are making various sizes from the Plantation Mills of 5 tons to the large city mill of 50 tons per day. Our mills have all the latest modern improvements in machinery, and produce the very best results. Send for circular.

CARDWELL MACHINE CO., Richmond, Va.

**DO YOU BELIEVE IN SIGNS**  
**JORY & CO.**  
Make Everything in  
**SIGNS**  
Baltimore & Light Sts.  
**BALTIMORE.**

POPULAR AND DIRECT ROUTE.

### THE BAY LINE

For Old Point Comfort, Norfolk and the South.

Steamers leave daily (except Sunday) Union Dock 6.30 P. M., Canton Wharf 7 P. M.; arrives Old Point Comfort 7 A. M., at Norfolk at 8 A. M., Portsmouth 8.15 A. M. At OLD POINT COMFORT connect with CHESAPEAKE & OHIO RAILROAD for Richmond, Charlottesville, Greenbrier, White Sulphur Springs, Louisville & Cincinnati and all points West. At NORFOLK with NORFOLK & WESTERN RAILROAD for Petersburg, Richmond, Lynchburg, Roanoke, Bristol, Knoxville, Chattanooga, Memphis and the Southwest; also with the NORFOLK SOUTHERN RAILROAD for Elizabeth City, Edenton and Eastern North Carolina. At PORTSMOUTH, VA., with SEABOARD & ROANOKE RAILROAD for Weldon, Raleigh, Southern Pines, Pine Bluff Health Resort, Peachland, Mount Holly, Charlotte, Fayetteville, Newberne, Wilmington, Charleston, Columbia, Augusta, Savannah, Jacksonville and all PRINCIPAL SOUTHERN CITIES.

*Palace Steamers, Unsurpassed Cuisine, Undisturbed Night's Rest. Save Connections.*  
For Tickets and information apply at Company's Office, 139 E. Baltimore Street, or on board steamers.  
E. BROWN, G. T. A. KENNON JONES, Agent.

### WANTS.

**WANTED.**—A first-class man who understands all about the manufacture of all kinds of Coffins and Burial Cases. Very best references required. Address, confidentially, ENTERPRISE, care Manufacturers' Record.

**WANTED.**—At Culpeper, Va., a practical man with small capital to go into a joint stock company and conduct a large flour and other mills. Manufacturers' tax free for ten years. Address S. R. SMITH, Culpeper, Va.

**WANTED A GOOD MECHANIC** with \$2,000 to \$5,000 capital, to take charge of good plant (cost \$20,000). Address T. W. OZMENT, Palestine, Texas.

### WANTED.

## A HOTEL BUILT

On the Atlantic Coast of Florida, where there is every facility for the rapid development of a park-town. Ten per cent. interest for five years is guaranteed on an investment of \$10,000 to \$15,000, and a bonus of one acre of land beautifully located opposite the station and three miles from the ocean beach, where there is the finest surf bathing at all seasons. For particulars address

"TOMOKA,"

Care Manufacturers' Record.

### ATTENTION,

Investors of Capital.

## National Type Writer Co.

Par Value of Stock \$100 per Share.

Fully Paid and Unassessable. No Liability to Stockholders.

A limited number of shares of the TREASURY STOCK will be sold to early applicants at \$20.00 per share. AN OPPORTUNITY seldom offered for a sound, reliable and first-class investment, in a strictly legitimate Manufacturing Business. GENTLEMEN or LADIES desiring full particulars will receive a circular containing full information by addressing

L. S. HAPGOOD, Treasurer,  
P. O. Box 5159, Boston, Mass.

**HARTMAN'S PATENT INSIDE SLIDING WINDOW BLIND**  
Is the most popular Blind in America. Architects and builders prefer it to any other for merit, style, convenience and economy. Not complicated. The only Blind that is furnished with an automatic Burglar Proof Lock, free of charge. This is an item of immense magnitude, and may save you many times the cost of blinds and perhaps life also, and the only blind that gives entire satisfaction. Thousands in use. Agents wanted everywhere. Send for illustrated catalogue and prices. Manufactured by **HARTMAN & DURSTINE,** No. 5 Beaver St., WOOSTER, OHIO.

**WILLER'S SLIDING BLINDS**  
SUPERIOR TO ALL OTHERS.  
Agents Wanted Everywhere  
AWARDED THE HIGHEST PRIZE AT THE CINCINNATI CENTENNIAL EXPOSITION.  
USED BY LEADING ARCHITECTS  
CLASSES OF BUSINESS WHEN VISITING FOR CATALOGUE OR ORDER  
**WILLIAM WILLER**  
SOLE MANUFACTURER—FOURTH & CEDAR STS. MILWAUKEE, WIS.

**THE JACKSON & WOODIN MFG. CO.**  
Cast Iron Gas and Water Pipe and Castings  
OF ALL DESCRIPTIONS.  
Berwick, Columbia Co., Pa.  
FREIGHT CARS, CAR WHEELS, BAR IRON,  
SPECIAL CASTINGS.



**For Sale.**  
**Wood-Burning Locomotives.**  
 Standard Gauge—15 Engines, 25 to 30 tons; one 10-ton Baldwin-Porter. 3-ft. Gauge—10 Shay patent, 8 to 18 tons; two Porter 10 and 13 ton. Other Engines, cars and rails.  
**A. S. MALES & CO.,**  
 18, 16 and 17 Astor Building, Cincinnati, O.

## Steam Fire Engines

### FOR SALE.

One Hunneman and one Button in first-class condition. Also all kinds of second-hand Engines and Boilers for sale cheap. For terms, prices, &c., address

**Lowell Steam Boiler Works,**  
 LOWELL, MASS.  
 Estimates given on New Work of every description.

## Textile Machinery

### FOR SALE.

Picking, Carding, Roving, Spinning, Spooling, Twisting, Reeling, Winding, Weaving and Finishing for Cotton and Woolen Mills. Very large stock to select from in our storehouses here, of over two acres of floorage.

**JEREMIAH CLARK,**  
 Lowell, Mass. Office, 63 Dutton St.

## FOR SALE CHEAP.

Second-Hand

## HAZLETON TRIPOD BOILERS

of 300 horse-power each. Address  
**SWIFT & CO.,** Station A, Kansas City, Mo.

## FOR SALE.

## JAMES MURRAY & SON.

One 40 H. P. Horizontal Steam Engine, (second-hand). One 60 H. P. Horizontal Tubular Boiler, (second-hand). New Engines and Boilers on hand and built to order. One S. H. Steam Pump, one S. H. Steam Hammer,

**PULLEYS, HANGERS & SHAFTING.**  
 102 to 108 E. York St., Baltimore.

## TO INVESTORS.

**The BEAVER LICK IRON COMPANY,**  
 WEST VIRGINIA.

Authorized Capital, \$1,000,000.

15,000 Acres Iron Land; 2,000 Acres New River Coking Coal. Nearly 800 Acres at White Sulphur Springs, West Virginia, for a town site. First issue of stock 7,000 shares, 1,000 of which has been taken. This is an enterprise which will bear careful examination.

For particulars apply to HON. A. C. SNYDER, President, Lewisburg, West Virginia, or to R. W. MONTAGUE, Secretary, White Sulphur Springs, West Virginia.

## 600,000 ACRES

OF  
 North Carolina Timber and Agricultural Lands

## ARE OFFERED FOR SALE

BY  
**"The Real Estate Investment Co."**

of Wilmington, N. C.

On these six hundred thousand acres will be found the best game preserves now left in the United States. Many tracts of this land are of great value, and they will be sold in a body or separately at reasonable prices which cannot fail to give to investors a large profit.

For further information apply to

**CHARLES M. STEDMAN, Prest.**

WILMINGTON, N. C.

## FOR SALE.

## Foundry & Machine Shop,

PATTERNS, &c.

1 1/2 acres of ground, centrally located in city. Ready established trade. Three railroads running within 50 yards. To be sold for a division, on account of the death of both partners. Full particulars will be furnished to enquiring parties by writing to

**MURRAY & STEVENSON,**  
 P. O. Box 346. ANNISTON, ALA.

## FOR SALE.

Five Single Surfacers. Three Double Surfacers. Three eight-inch Matchers (four-sided). Two fourteen-inch Matchers (four-sided). Two twenty-four-inch Matchers (three-sided). ALL SECOND-HAND. Send for full list to  
**THE PREBLE MACHINE WORKS CO.**  
 88 & 40 W. MONROE ST., CHICAGO, ILL.

## BARGAINS.

Second-Hand Machinery. Good Condition.

**L. F. SEYFERT,**

No. 437, 439, 441 N. 3d St., PHILADELPHIA, PA.

1 25 H. P. Lidgerwood Hoist'g Eng., cyl. 10x12 in.

6, 8, 10, 15 and 20 H. P. Portable Hoisting Engines,

single & double cyl. & drum. Comb'd & single.

1 15 H. P. Geiser Traction Engine and Boiler.

1 15 H. P. Agricultural Eng. & Boiler on wheels.

1 8 H. P. Agricultural Engine & Boiler on wheels.

30, 40 and 50 H. P. "Southwark" Aut. H. S. Eng.

1 6 H. P. Baxter Engine and Boiler.

1 2 H. P. Baxter Engine and Boiler.

1 8 H. P. Locomotive Boiler (23), 2-in. tubes.

2 25 H. P. R. T. Boilers, 42" x 120" (28) 3 in. tubes.

20 Upright Tub. Still Boil'rs. New. 4-40 H. P. Cheap

1 Light Trip Hammers. 1 16-in. L. Power's Jointer.

1 Fitzburg Engine Lathe, 18x8 feet.

2 Fitzburg Engine Lathes, 15' x 6'.

1 Harrington Engine Lathe 22 in. x 10 ft.

1 Whitcomb Planer, 28x28 in. x 7 ft.

1 26 in. Single Surfacers, double belted. G. & W.

PLEASE WRITE FOR PRICES.

## Second-Hand Machinery Cheap.

1 84 in. x 20 ft. Engine Lathe.

1 84 in. x 20 ft. Eng. Lathe, with end face plate & rest.

1 90 in. x 18 ft. Engine Lathe, triple geared.

1 10 in. x 3 ft. Traverse Shaper. Sellers.

1 Brown & Sharpe No. 1 Universal Miller.

1 Brainard No. 3 Universal Miller.

1 Brainard No. 4 Universal Miller.

1 No. 2 Lincoln Patent Miller.

1 400-lb. Drop Hammer.

1 800-lb. Drop Hammer.

1 No. 7 Root Blower.

1 No. 3 Sturtevant Exhaust.

1 36 in. x 12 ft. Chucking Machine.

1 Set 10 in. x 6 ft. Boiler Makers' Rolls, power.

Write us for what you want and send description of Machinery that you have to trade or sell.

**THE J. A. MACKINNON MACHINERY CO.**

22 Warren Street, New York.

## SECOND-HAND MACHINERY.

1 Iron Planer, planes 10 feet long, 52x48 in.

1 " " " " 5 feet " 25x24 in.

1 Iron Pl. planes 8 ft. long, 38 in. x 36 in. Sellers, 2 hds.

1 Engine Lathe, 20-ft. bed, 72-in. swing. Good.

1 Engine Lathe, 10-ft. bed, 20-in. swing. Good.

1 Engine Lathe, 15 feet bed, 28 inch swing.

1 " " " " 8 ft. bed, 20 in. swing, N.Y.S. E.

Co. make, and various other sizes.

1 Small Turret Head Lathe.

1 20 inch Plain Drilling Machine.

1 25 " " " "

1 Betts 50-in. Horizontal Boring Mill.

1 6 1/2 in. Slotter, automatic feed.

1 30-lb. Bradley Customed Hammer.

1 50 lb. " " " "

1 Power Alligator Shears, small.

1 No. 5 Stiles & Parker Press, At.

Send for list Second-hand tools.

## NEW YORK MACHINERY DEPOT,

Brooklyn Bridge Store, 16, New York

## Second-Hand MACHINERY in Good Order

FOR SALE CHEAP.

Engine Lathes—62 in. x 17 ft.; 42 in. x 12 ft.; 32 in.

x 12 ft.; 29 in. x 15 ft.; 24 in. x 10 ft.; 22 in. x 8 ft.

and 12 ft. 20 in. x 8 and 12 ft. 15 in. x 6 and 8 ft.

1 each 24 in. x 20 in. and 24 in. x 12 ft.; 24 in.

x 15 and 16 ft.; 18 in. x 10 ft.; 20 in. x 10 ft.; 20 in.

x 12 ft.; 1 each 16 in. x 6, 8 and 10 ft.; 6 each 14 in. x

6 ft.; 1 1/2 in. x 5 ft.; 2 each 11 in. x 4 ft. and 5 ft.

1 10 in. x 3 1/2 ft. foot power.

1 each Planer, 24 in. x 24 in. x 5 and 8 ft.

1 each Planer, 30 in. x 30 in. x 8 ft.

1 Planer, 54 in. x 52 in. x 12 ft., 30 in. x 50 in. x 17 ft.

1 Planer, 40 in. x 40 in. x 14 ft.

1 Planer, 42 in. x 42 in. x 10 and 12 ft.

1 Planer, 22 in. x 20 in. x 4 and 5 ft.

1 Planer, 16 in. x 16 in. x 3 ft.

1 Planer, 42 in. x 42 in. x 12 ft., with two heads.

1 Planer, 50 in. x 50 in. x 17 ft., with one head.

1 Planer, 100 in. x 100 in. x 18 ft., with two heads.

1 Engine Lathe, 22x22 ft., good order. Niles.

1 New Horizontal Boring Machine, with facing

attachment, Newark Machine Tool Co., makers.

1 24x184-foot Planer. Ames.

1 Drop Hammer, 75 pounds.

1 48-in. Radial Drill.

1 Shaper each 6, 16, 12, 15, 20, 24 and 30-in. strike.

3 Crank Planers. 6 Lincoln Pat. No. 2 Millers.

1 Universal Miller. Brown & Sharpe.

1 each 2, 3, 4 and 6 Spindle Gang Drill.

1 each Nos. 1, 3, 4 and 5 Screw Machines.

1 each 40 and 60 pound Vertical Hammers.

1 No. 53 Ferracute Press. 1 Nut-facing Machine.

1 No. 2 1/2 Fowler Press.

10 Foot Presses, assorted. 8 Power Presses, ass'd.

12 Punching and Shearing Machines, assorted.

2 Return Tubular Boilers, 35 horse-power.

1 Bolt Cutter, each 1/2 in. to 1 in. and 1/2 in. to 2 in.

1 No. 1 Hand Millers. Pratt & Whitney.

1 Horizontal Engine each 25 and 45 horse-power.

1 Horizontal Boring Machine, 36in. x 6 ft.

2 each 8 and 13-inch Slotters. Correspondence

1 Power Mortising Machine. solicited.

Also full line of New Machinery.

**PRENTISS TOOL & SUPPLY CO.**

P. O. Box 336. 115 Liberty St., New York City.

## CARLISLE MFG. CO.

## Cars, Engines, Frogs

AND SWITCHES,

CARLISLE, PA.

## STEEL RAILS AND EQUIPMENT.

Light Sections, 8 to 45 lb. New and  
 Standard Sections, 50 lb. and up. Second-hand.  
 Locomotives, Passenger and Freight  
 Cars, all descriptions, for sale.

**O. W. CHILD & CO.**  
 115 BROADWAY, NEW YORK.

## BOILERS, ENGINES,

## LIGHT LOCOMOTIVES,

## RAILS and EQUIPMENT,

Cotton Gins, Saw Mills,  
 Wood - Working Machinery,  
 and Heavy Hardware.

## F. A. ESTEP.

OFFICE AND WAREHOUSE:

Corner Market and Cowart Streets,  
 CHATTANOOGA, TENN.

## — Steel Rails, all Weights. —

I have FOR SALE about 1,000 tons thirty pound second-hand Steel Rails and Fastenings, for prompt delivery in South Carolina. They are undoubtedly the best lot of second-hand Steel Rails ever offered for sale. I am also prepared to furnish new or second-hand Standard or Narrow Gauge Railway Equipment, Steel Rails, Fish-Plates, Bolts and Nuts, &c.

**BENJAMIN WATSON, 40 Wall Street, New York.**

## FOR SALE. Rails, Spikes, Fastenings, Frogs, Switches and

Crossings. Locomotives, Dummies, Cars,  
 Wheels and Axles. Complete outfits for logging Roads and Street Rail-  
 ways. New and Second-hand.

## WILLIAM MINNIGERODE, Dealer in RAILWAY SUPPLIES,

ROOM 8, JOHNSTON BUILDING, CINCINNATI, O.



## Keep Your Belts From Slipping,

And Save Your Power by Using Friction Covering for Pulleys.

Satisfaction Guaranteed. Easily Applied. No Rivets. Effective.

**NATIONAL PULLEY COVERING CO., Baltimore, Md.**

JAMES IRVINE, Pres. GEO. B. F. COOPER, Vice-Pres. WM. V. CAROLIN, Sec. & Treas.

## NEW YORK EQUIPMENT CO., 15 Wall Street, New York.

Have for Sale for Cash or Lease on Easy Terms on the CAR TRUST PLAN.

## LOCOMOTIVES,

## PASSENGER AND FREIGHT CARS, ETC.

Of both Standard and Narrow Gauge, to Railroad Companies, Logging  
 Railroads, Mining Companies, Contractors, Etc.

We have on hand 3,000 tons of 35-lb. second-hand iron T rail, good to relay! We carry in stock second-hand rail of any section desired. We are prepared to furnish Locomotives to railroad companies or contractors on monthly rentals for long or short terms. Send for Circulars. Correspondence solicited.

## FOR SALE for Cash, or Credit on Car Trust.

20 Second-Hand Narrow Gauge Passenger Coaches.  
 20 Second-Hand Standard Gauge Passenger Coaches.  
 30 New Standard Gauge Passenger Coaches, built at one of the best works in the United States; all modern improvements. Price \$3,700 each. Now ready for lettering.  
 40 Second-hand Narrow Gauge Locomotives. Different sizes.  
 60 Second-Hand Standard Gauge Locomotives. Different sizes.  
 These Locomotives have been overhauled. All are in good condition. Ready for immediate use. 1,000 tons of 40 lb. second-hand steel and iron rails. 800 tons of 35 lb. iron and steel rails. All these rails are in good order. Southern and Eastern delivery.  
 Also materials railroads use, and bonds negotiated on good roads.

## WANTED TO PURCHASE.

Second-Hand COACHES, of both gauges, narrow and standard. Also all kinds of FREIGHT CARS.

Apply to **ALFRED W. LADD, 44 Broadway, New York.**

## Cotton Machinery.

1 3,000 Spindle Carpet Warp Plant.  
 1 200 Loom Plant for Osnaburghs, Sheet-  
 ings, Drill, &c.  
 1 System Bagging Machinery, capacity  
 30,000 lbs. per week.  
 1 Full System of Print Cloth Machinery,  
 160 LOOMS.

110 Potter 36 in. Cards, 18 in. Doffers,  
 Quick-Running Comb, nicely clothed with  
 ENGLISH Clothing. These Cards are a  
 BARGAIN.

Also a large lot of Miscellaneous Ma-  
 chinery in first-class condition.

**L. Godfrey & Co., 147 Gaspee Street, Providence, R.I.**



## TRADE NOTES.

THE Menasha Wood Split Pulley Co., of Menasha, Wis., had orders last week for their hickory pulleys from A. H. Heilman & Co., Montoursville, Pa.; Wallis, Carley & Co., Sharon, Pa.; Piedmont Pulp & Paper Co., Piedmont, W. Va., and Salmon Bros., Slidell, La.

PRICES and all kinds of information regarding railway equipments are furnished by Wm. Minnigerode, Johnson Building, Cincinnati, Ohio. He furnishes rails, frogs, spikes, bolts, wheels, axles, cars, locomotives; in short, anything connected with railroad construction and operation.

THE Cambridge Iron Roofing Co., Cambridge, O., are having a good trade from the South, and are preparing to cover that section of the country more thoroughly than heretofore. Mr. J. E. Annis, of this firm, and secretary of the Roofers' Association, recently in convention at Chicago, has just returned from an extended tour of the principal Southern industrial centers and voices the sentiment of all others who have visited the South, that the prosperity there is solid and of the "come to stay" sort.

AMONG the leading manufacturers of carefully-adjusted tools are Locke Bros., of Salem, Mass. Among their specialties is the Locke gauge-testing damper regulator, two of which are in the School of Technology at Boston, Mass. These regulators are extensively used by the government, and forty mills at Fall River use them. Another specialty is the Locke reducing valve; also the Locke steam trap; the Locke combination pressure regulator and back pressure valve for controlling steam pressure; the Locke reliable check valve, which is noiseless and sure to be tight; the Locke disc valve and other specialties. Catalogues of these various specialties can be had upon application.

AMONG the leading typewriters is the Smith Premier, manufactured by the Smith Premier Typewriter Co., of Syracuse, N. Y. An expert who has used other machines recently said of this machine: "The simplicity of the arrangement of the keyboard, the improvements which make it possible to do any kind of work with perfect ease, the beauty and evenness of the type, the strength and durability of all parts, the advantages of the double movement of the ribbon, the brush for cleaning the type and the light and easy running of the whole apparatus, proves to me, as it would to any who try it, that it is without exception the best typewriter of the age. I beg to say that after using the Smith Premier four months, it has become my friend, and nothing could induce me to part with it."

WHAT is claimed to be the most advanced idea in dealing with the problem of scale and corrosion in boilers is embodied in the invention of a Pittsburgh firm of chemists and engineers, who have been meeting with great success during the past five years in this line. They make a compound, the base of which is a heavy natural oil, free from tar and wax, of an exceedingly greasy nature, having a vaporizing point of about 200° Fahrenheit above the temperature of the boiler, which prevents its evaporation with the steam. This petroleum is compounded with certain elements which greatly add to its value. The compound acts by giving a slightly greasy coating to the inside of the boiler, scarcely perceptible—like the touch of a sweaty hand on a window-pane—but sufficient to prevent adhesion of scale, and by giving a slightly greasy character to the mineral contained in the water, and thus preventing it from

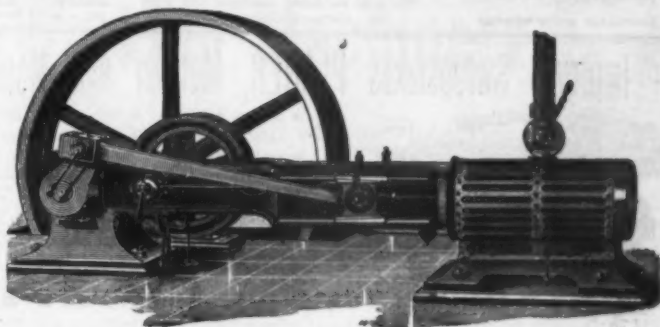
aggregating or solidifying until it can be washed or blown out of the boiler, it being a fact that crystallization of mineral salts cannot take place if the atoms of which they are composed or the water in which they are held in solution contain the slightest amount of oily substance. It contains neither acid nor alkali, and is so bland that it may be used as a soothing dressing for a burn or scald. Corrosion or pitting from acid feed-water is positively prevented. Its cost is not more than one-fourth as much as the chemical compounds. By writing to the Pittsburgh Boiler Scale Resolvent Co., 72 Verner Building, Pittsburgh, Pa., a handsome pamphlet with full particulars will be sent by mail.

THE Goulds Manufacturing Co., Seneca Falls, N. Y., have just issued an illustrated circular descriptive of their three cylinder or triplex suction and force pumps. The MANUFACTURERS' RECORD is in receipt of a set of blue prints showing several combinations of these pumps mounted on common bed plate. In their different forms, these pumps may be adapted for a wide range of service, such as for general water supply; for hydraulic pulp grinders; hydraulic elevators; suction pumps in paper mills, etc. They can be driven by any of the motive powers, including high-speed electric motors, and the triplex pump is claimed to be the best for electric motor service yet devised. The effect of the three-throw crank and three cylinders is to offer an even and unvarying resistance to the motor. In other words, there are absolutely no dead centers in throw of crank shaft, and this contributes to its smoothness and regularity of operation. These pumps are made one with outside packed plungers with or without, as desired, gearing for high pressure service; the other, with inside packed plungers for low pressure service. Both high and low pressure pumps have hand holes for easy access to all valves, which are of hard rubber with spiral springs similar to steam pump valves, with composition grid seats. The high pressure plungers reciprocate through carefully fitted glands, and will move either hot or cold water, no matter how dirty or gritty, semi-fluids and the like without cutting; while the low-pressure plungers are about 8 inches long with three hydraulic cup leather packings fitted to each cylinder so accurately and nicely as to produce the minimum of friction in operation. The field of application of these pumps is so extensive that it would well repay anyone interested in the subject to look into their many points of advantage. Illustrated descriptive circulars will be sent upon application to the manufacturers.

## E. J. WOOD, Consulting Engineer and Contractor,

243 BROADWAY, NEW YORK.

Superintendent of the Construction and Erection of Factories,  
Steam Plants and all kinds of Machinery.  
Engines Indicated, Valves Adjusted and Power Measured.



COMPLETE STEAM PLANTS. BOILERS, ENGINES, Every Description.  
SHAFTING, PULLEYS, HANGERS.  
DRAWINGS AND SUPERINTENDENCE. ECONOMY GUARANTEED.  
CORRESPONDENCE SOLICITED.

I also make a Specialty of Taking Down, Removing and Reerecting Steam Plants and Machinery of every description. Send for Catalogue F.

## HARRISON SAFETY BOILERS.

Merits Proven by Over  
Twenty Years' Practical Work.

Combine Maximum Safety,  
Economy of Fuel, Durability.

All sizes from 4  
H. P. to 340 H. P.

Base of Transportation, Erection and Repair.  
Full Particulars, Drawings and Estimates  
mailed upon application.

HARRISON SAFETY BOILER WORKS, Germantown Junction, Philadelphia, Pa.  
Southern Office, 9 to 13 N. Pryor street, Atlanta, Ga.

**THE NEW PULSOMETER STEAM PUMP**

Unequaled in Economy, Efficiency, Durability and Cheapness for

MINTING, RAILROADS, STEAMBOATS, COPPER DAMS, SEWERS, HYDRAULIC MINING, <td>PAPER MILLS, CHEMICAL WORKS, GAS WORKS, TANNERIES, BREWERIES, SUGAR REFINERIES, BRICK YARDS,</td> <td>QUARRIES, IRRIGATION, FOUNDATIONS, EXCAVATIONS, WELL RIGGING, and all kinds of general contractors' work, fire and manufacturing purposes.</td>	PAPER MILLS, CHEMICAL WORKS, GAS WORKS, TANNERIES, BREWERIES, SUGAR REFINERIES, BRICK YARDS,	QUARRIES, IRRIGATION, FOUNDATIONS, EXCAVATIONS, WELL RIGGING, and all kinds of general contractors' work, fire and manufacturing purposes.
---	--	---

Patented in  
U. S. and Canada.

**PULSOMETER STEAM PUMP CO.,**  
Manufacturers and Sole Owners,  
120 Liberty St., New York.

**Improved Screw Cutting LATHES**  
FOOT AND POWER

Drill Presses, Shapers, Band, Circular and Scroll  
Saws, Machinists' Tools and Supplies. Lathes  
on trial. Catalogue mailed on application.

**THE SEBASTIAN-MAY CO.**  
192 West Second St., CINCINNATI, O.

## WM. SIMPKIN A. S. M. E. SIMPKIN & HILLYER, L. G. HILLYER, M. E. ENGINEERS and CONTRACTORS RICHMOND, VA.

Manufacturers of and Agents for Steam Engines, Boilers, Pumps and Heavy Machinery. Economical Steam Plants, Rope and Belt Driving. Special Machinery for Chemical and Fertilizing Works, Gas, Water and Creosote Works. A specialty of the "Warwick" Pole Road Locomotive, "Warwick" Tram Road Locomotive, and the "Warwick" Silent Steam Street Motor. Castings furnished. Repair work solicited. Consultations, Arbitrations and Valuations. Engines indicated. Plans, Specifications and Estimates prepared. Correspondence invited.

WORKS—Newport News, Va.

GENERAL OFFICE—1105 Main St., Richmond, Va.

SEND ALL REPAIRS TO OUR WORKS.

HERMANN SCHMIDT, President.

R. F. HUDSON, Secretary and Treasurer.

W. SIMPKIN, Vice-President and Gen. Agent.

## THE RICHMOND ICE-MACHINE CO. Manufacturers of the Most Improved RICHMOND, VA.

## Ice-Making and Refrigerating Machinery

ON THE COMPRESSION PLAN.

We guarantee the proper working of our machinery. All working parts built to gauge, so they can be readily duplicated, and nothing but the very best material used. Specifications and estimates furnished. Correspondence solicited.

P. O. Box 315.

GENERAL OFFICE 1105 MAIN STREET, RICHMOND, VA.

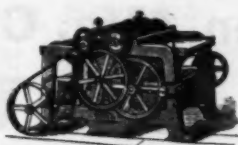
Send for our Pamphlet "How to Make an Ice Factory Pay."







No. 5 1/2—Pacific Planer and Matcher.



No. 4 1/2—Smoothing Planer.



Horizontal Borer.



No. 2—Self-Feed Rip Saw.



No. 3—Molding Machine.



No. 2  
Pat. Scroll Saw.

W. H. DOANE, Pres't.

**J. A. FAY & CO.**

D. L. LYON, Sec'y.

CINCINNATI, OHIO.

Manufacturers of  
—PATENT—

**Improved Wood-Working Machinery**

OF EVERY DESCRIPTION,

For Planing Mills, Sash, Door and Blind Shops, Furniture, Carriage and Wagon Factories,  
Spoke, Wheel and Agricultural Works, Car Shops, etc.

Awarded 'GRAND PRIX' at the Great PARIS EXPOSITION of 1889.

Every Machine Tested and Warranted.  
Send for Circulars and Estimates.



No. 1  
Band Saw.



# Wood Working Machinery



COMPLETE OUTFITS FOR PLANING MILLS

**H. B. SMITH MACHINE CO.**

Send for catalogue and visit our extensive  
warerooms if possible.

**925 MARKET STREET.**

**PHILADA, PA., U. S. A.**

Established 1840.

**HENRY DISSTON & SONS,**

Established 1840.

Incorporated,

**Keystone Saw, Tool, Steel and File Works,**

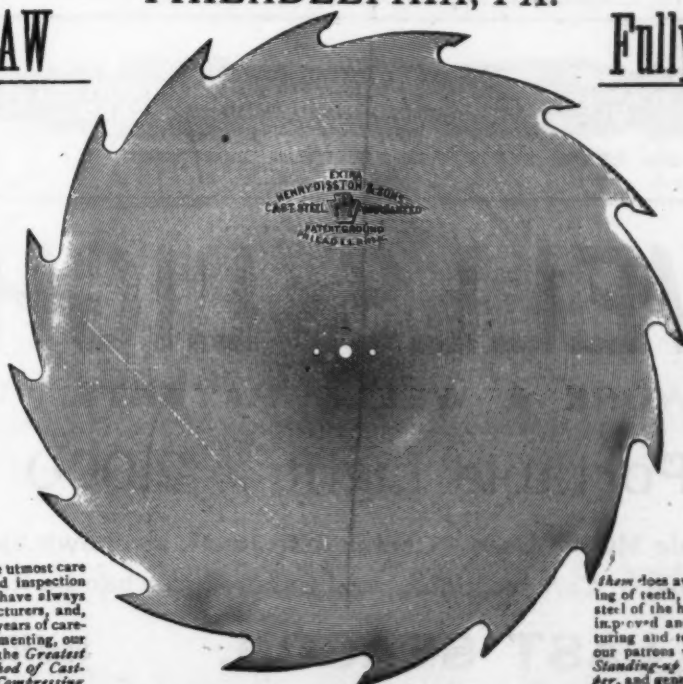
PHILADELPHIA, PA.

**Every SAW**

**Fully Warranted.**

BRANCH HOUSE:  
Cor. Randolph and Market Streets,  
**CHICAGO, ILL.**

Send for Price List and Discount Sheet and  
New Illustrated Edition of Files.



Send for New edition of Lumberman's Hand  
Book and Sawyer's Pocket Edition.

BRANCH HOUSE:  
923 West Main Street,  
**LOUISVILLE, KY.**

WE have always taken the utmost care  
in the manufacture and inspection  
of our steel and saws, have always  
headed the list of saw manufacturers, and  
we are happy to say, that after years of care-  
ful study and expensive experimenting, our  
efforts have been crowned with the Greatest  
Success of the Age, as our Method of Cast-  
ing Steel Ingots and Process of Compressing

them does away with the splitting and  
spalling of teeth, makes a hard, tough and elastic  
steel of the highest quality, which, with our  
improved and patented process of manufac-  
turing and tempering enables us to furnish  
our patrons with saws that for Toughness,  
Standing-up Quality, Uniformity of Tem-  
per, and general superiority,

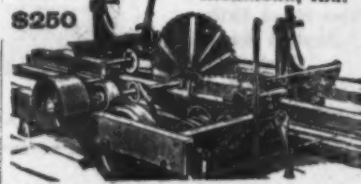
**HAVE NEVER BEEN EQUALLED.**

THE BEST MILL BUILT.

Send for circular.

\$200  
\$250

Richmond Machine Works  
Richmond, Ind.



JIG SAW.



CORNER BLOCK MACHINE.

**P. PRYIBIL,**

518 to 524 W. 41st Street, New York City.

MANUFACTURER OF SUPERIOR

**Wood-Working Machinery,**

Shafting, Pulleys and Hangers.

Send for Catalogue "A."



Established  
1853.**Wheeler, Madden & Clemson Mfg. Co., Middletown, N.Y.**

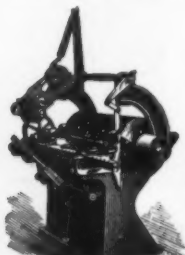
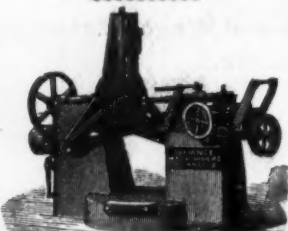
Manufacturers of Hand, Cross-Cut and Wood

No. 24 Hand, Panel and Rip Saws—26-inch, list \$20.00  
per dozen.PRICE, QUALITY and general SUPERIORITY taken into consideration, this is the Best Hand Saw  
on the market for Mechanics use.**SAWS.**Extra Thin Back. Patent Handle. Hollow Back Blade.  
PERFECT TEMPER. ELEGANT FINISH. SUPERIOR FILING.CROSS-CUTS furnished in all the leading shapes, sizes and styles of teeth, in both WIDE,  
NARROW and ONE MAN Saws. Only the very best of Crucible Steel of our own manufacture  
enters into our goods, and we fully warrant them in each and every particular. We are now turning  
out the finest goods ever produced in our line. For Sale by all Leading Jobbers and Dealers.

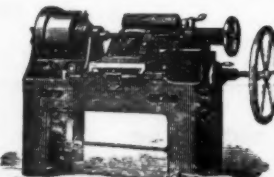
Established 1850.

**Defiance Machine Works,**  
DEFIANCE, OHIO.

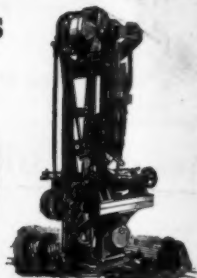
MANUFACTURERS OF

HUB, SPOKE, WHEEL, BENDING  
**Wagon and Carriage Machinery.**Patent Flaw-Handle Benders, Shapers, Cut-off Saw and Re-  
volving Polishers, Hot-Form, Double and Single Bent Pole and  
Express Shaft Benders, Neck-Yoke, Singletree, Brush Handle  
Lathes and Finishing Machines. Estimates and Circulars  
given upon application.COMPLETE OUTFITS  
FURNISHED.Patent Automatic Combined  
Spoke, Turning and Squaring  
Machine for common, seven  
patent or sharp-edged spoke  
turning; capacity 2,000 per day

Wheel-Boxing Machine.



Patent Hub-Turning Machine.

Patent Automatic Double-  
Chisel Hub-Mortising Ma-  
chine. Built in three sizes.FOR FAULTLESS.  
FAITHFUL,  
FAST FEEDING**WOOD WORKING MACHINERY**

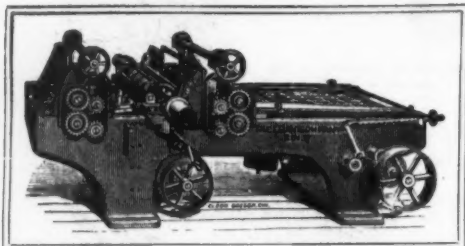
OF EVERY DESCRIPTION.

Address

**THE EGAN COMPANY,**

228 to 248 W. Front St., Cincinnati, O.

Latest Expression of American Ingenuity.



Send for New Catalogue and Information.

Complete Outfits  
For Planing Mills, Sash,  
Door, Blind, Chair, Furni-  
ture, Carriage and Wagon  
Factories, General Wood  
Workers, &c.

Established 1874.

MANUFACTURERS OF

Taper Shank Drills,  
Straight Shank Drills,  
Blacksmith Drills,  
Bitstock Drills,  
Straight Fluted Drills,  
Machine Bit Drills**Cleveland Twist Drill Co.**

Send for Catalogue.

OFFICES—

{ Cor. of Lake & Kirtland Sts., Cleveland, O. }  
101 Chambers Street, New York.

Write for Discounts.

MANUFACTURERS OF

Self-feeding Reamers,  
Expanding Reamers,  
Shell Reamers,  
Stay-bolt Taps,  
Taper ReamersPERFORATED METALS OF EVERY DESCRIPTION  
BY THE HARRINGTON & KING PERFORATING CO. CHICAGO.

EASTERN OFFICE, No. 284 PEARL STREET, Cor. Beekman, NEW YORK.

**THE "WELLS LIGHT."**

WALLWORK &amp; WELLS' PATENTS. (Registered Title.)

Powerful Portable Light UP TO 2,000 C. P.

Self Contained. No Outside Motive Used. Complete in Itself, as shown by Accompanying  
Cut. Simple in Construction. Any Laborer can handle it.**3,000 SOLD LAST SEASON.**

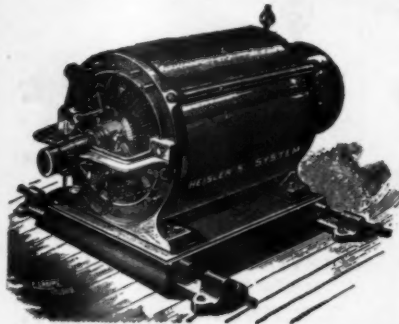
UNAFFECTED BY WEATHER.

**KEEGAN & HALPIN,**44 & 46 Washington St.,  
NEW YORK.FOR FULL INFORMATION  
APPLY TO



## THE HEISLER PATENT Long Distance Incandescent Electric Light System.

UNEQUALLED FOR DISTRIBUTION OVER WIDE AREAS.



**S**PECIALY ADAPTED FOR STREET, COMMERCIAL & DOMESTIC ILLUMINATION FROM CENTRAL STATIONS.

Plant may be located where power can be secured cheapest, even if miles distant from the lighting. Safety, Reliability, and Financial Success fully demonstrated. Plan of Wiring the Simplest, Cheapest and most Efficient. Strictly Series. Noted for the Brilliance and Beauty of the Light. Lamps, 10 to 100 Candle Power; Long Life without Blackening. Dynamo Self-contained and perfectly Automatic.

**Heisler Electric Light Company,**

809 to 817 South Seventh Street, ST. LOUIS, MO.

"Awarded the Highest Distinction—a Gold Medal—by the International Jury at the Universal Exposition, Paris, 1889."

Send for Circulars.

Correspondence Solicited.

Arc and Incandescent  
Electric Lights.

Water Works,  
Motors.

Illuminating and Fuel  
Gases.

# L. N. COX,

16 Fifth Street, S. E.

WASHINGTON, D. C.

Correspondence Solicited. Plans, Specifications, Estimates, &c., cheerfully furnished

**Record Printing House,** Cor. Exchange Pl. and Commerce St.  
BOOKS. NEWSPAPERS. CIRCULARS. FINE CUT WORK.  
PAMPHLETS. CATALOGUES. PRICE-LISTS. & SPECIAL TV.

## The New Industrial Light "Lucigen"

BRILLIANT, POWERFUL AND DIFFUSIVE.

Burns Petroleum Oil Sprayed by Compressed Air.

SIMPLE, SAFE AND ECONOMICAL.

Thousands in use in Iron Works, Machine Shops, Railroad Yards, etc., etc., in Europe and in the United States.

Lamps and Burners from 200 to 10,000 Candle Power.

MANUFACTURED BY THE

**INDUSTRIAL LIGHT COMPANY,**  
196 Temple Court, New York City.

AUTHORIZED REPRESENTATIVES—Rand Drill Company, New York City; Buffalo Engineering Co., 228 Pearl Street, Buffalo, N. Y.; W. H. Carruthers & Co., Chamber of Commerce Building, St. Louis, Mo.; Joseph Parks, Bay View, Milwaukee, Wis.; Isaac Reynolds, 5 Euclid Avenue, Cleveland, Ohio; Farvin & Co., 133 S. Fourth Street, Philadelphia, Pa.



## The CLEVELAND GAS MACHINE CO.

176 CENTRAL WAY,

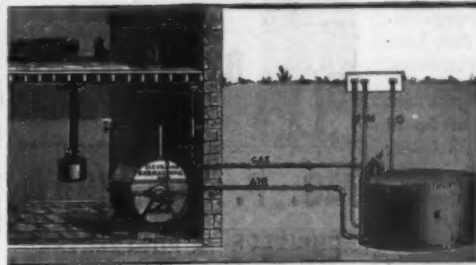
CLEVELAND, O.

MANUFACTURERS OF

**Improved Gas Machines**

For Illuminating and Heating

purposes. Especially adapted for Canning Factories, Mills, Churches and Stores; Country and Suburban Residences requiring from 20 to 1,000 lights; also Gas-Soldering and Metal-Heating Outfits and Special Machines for Meat-Packing Establishments. Correspondence solicited. Send for illustrated circular.



**SAVE GAS. REDUCE BILLS AND SECURE BETTER LIGHT.**

## The American Gas Saving Co's Gas Controller.

Over 200,000 in use. Saves from 15 to 50 per cent. according to pressure in mains.

Adopted by U. S. Government after competitive tests; New York Elevated Railroad (saving \$11,519.37 in five months, over \$100,000.00 in five years). In use in thousands of Mills, Factories, Hotels, Depots, Public Buildings and Private Houses. Send for descriptive circular and testimonials. Find size of meter on brass plate in front with maker's name.

Full directions for attachment and testing sent with each. Controllers sent for trial on receipt of price, and money refunded, less express charges, if unsatisfactory and controllers returned in good order. All orders C. O. D. Agents wanted.

**AMERICAN GAS SAVING CO.,** 35 Broadway, N. Y.

# The THOMSON-HOUSTON ELECTRIC COMPANY,

MANUFACTURER OF

## Dynamos and Lamps for Electric Arc Lighting

For Central Stations and Isolated Plants.

## 70,000 Arc Lamps in Daily Operation.

Fifty-two per cent. of all the Arc Lamps used by Gas Companies, and twenty-five per cent. of the entire number used in the United States are of **THOMSON-HOUSTON MANUFACTURE**. What better proof than this could be offered of the merits of the system.

## THE THOMSON-HOUSTON ELECTRIC CO.

620 Atlantic Avenue, BOSTON, MASS.

148 Michigan Avenue, CHICAGO, ILL.

Wall and Loyd Streets, ATLANTA, GA.

403-405 Sibley St., ST. PAUL, MINN.





## Power Transmitting Machinery.

The Stilwell & Bierce Manufacturing Co., of Dayton, Ohio, are now making a specialty of power transmitting machinery. The engraving published herewith represents some work in heavy gears, pulleys, iron harness, fire-pump with friction drive,

tured by the Detroit (Mich.) Heating & Lighting Co., is one of the oldest on the market, and for over 20 years has stood in the front rank of lighting apparatus. It is perfected by every device suggested by long experience, and its material and workmanship are as good as money can procure. This machine produces gas by what is known as the "carbureting" process, by

its connecting pipes, is buried in the ground at a depth that precludes possibility of accident and prevents the temperature of the gasoline or the gas being affected by the weather.

The motive power of the blower is a weight which must occasionally be wound up. The blower takes in air and forces it through the air pipe to the carbureter.

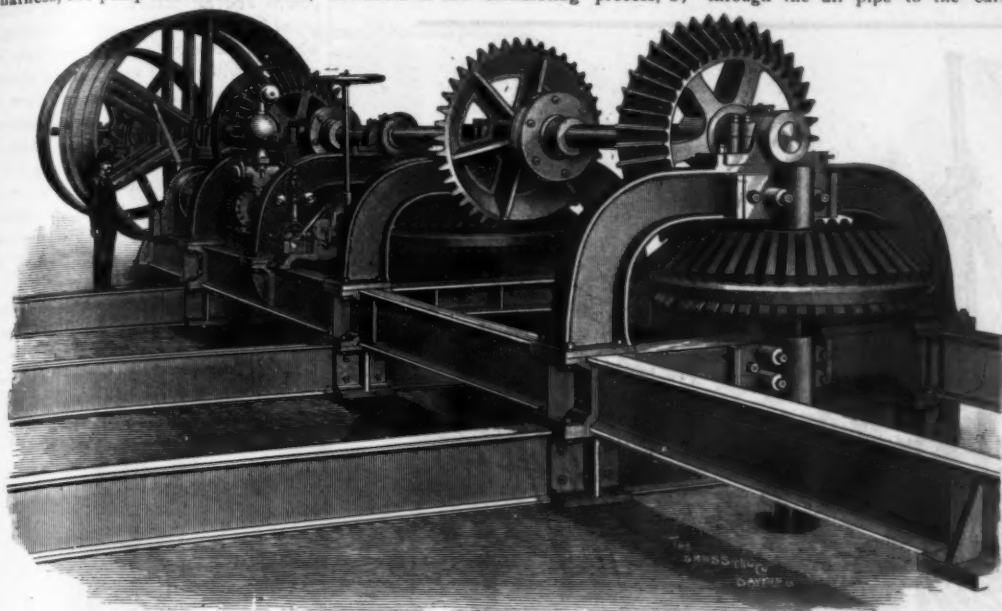
of gasoline will produce about 1,000 cubic feet of gas, so that in localities convenient to gasoline markets their machines will furnish gas at about 70 to 80 cents per 1,000 feet. As compared with oil lamps, the cost is about the same for an equal number of lights; but if the estimate is based on the quantity of light furnished, the gas is materially cheaper. This machine has been accepted and approved by the National Board of Underwriters, and in using it there is no increase in insurance rates over buildings lighted by city gas. Further particulars regarding this machine and a copy of the handsome catalogue may be had by applying to the manufacturers.

## The Auburn Watchman's Register and Fire Alarm.

The Bundy Manufacturing Co., of Binghamton, N. Y., whose electric cash register was described in these columns some months ago, have put upon the market the "Auburn" watchman's register and fire alarm. This register is the invention of Mr. Willard L. Bundy, superintendent of the works.

The register is designed to furnish a record showing whether a watchman has performed the duties for which he is paid, and it does it more positively and satisfactorily than could a person, because there can be no collusion between the watcher and watched. A paper dial is placed in the register each day, the door is locked, and the manufacturer, merchant or banker goes to his home, conscious of the fact that in the morning he can tell at a glance whether his employee has been faithful and has visited the required points in the factory or building at the proper intervals, the order in which his rounds were made and the time he visited each designated point. If desired, as an additional precaution, an attachment is furnished which will ring a bell in the house of the proprietor, the superintendent or wherever desired should the watchman neglect to start on his rounds five, ten or any desired number of minutes after the hour. If the watchman fell asleep or anything unusual happened to prevent his attending to his duty, immediately notice would be given so that an investigation might be made. The importance of this attachment is shown by the fact that if notice of neglect on the part of the watchman is not given until morning, when the dial is inspected, in the meantime the building might be robbed or the factory burned to the ground. Another striking feature of the register is its combination with a fire alarm, which can be operated either automatically with a system of thermostats or by the watchman or both, thus reducing the liability of destruction by fire to a minimum.

If the watchman discovers a fire about the premises he goes to the nearest station box, turns the key and allows it to remain



POWER TRANSMITTING MACHINERY.

&c., which they lately placed in connection with three large Victor turbines in one of the leading cotton mills of this country, and is a fair specimen of their work in this line.

All of their patterns for power connection are new and of the most approved proportions and designs calculated to meet the most exacting requirements of modern engineering. They have just published a handsome catalogue containing an extensive and complete list of patterns for gears, pulleys and other power connections together with quite an amount of valuable and carefully prepared information which renders the book a valuable pocket companion for engineers. They send this catalogue gratuitously, on application, to engineers and mill superintendents, and to all others who may be in the market for work in this line.

## The Detroit Gas Machine.

Where neither city gas nor electric light is available, oil lamps are commonly used. These are troublesome and inconvenient,

which atmospheric air is brought in contact with gasoline and enriched by the absorption of its carbonaceous vapors.

The machine consists of a blower or air

Here the air passes over the surface of the gasoline in the several cells and, enriched with its illuminating properties, returns through the gas pipe to the riser in the



FIG. 2.—A HOUSE THAT USES A DETROIT GAS MACHINE.

pump and a carbureter or generating tank. The carbureter is an air-tight tank of heavy galvanized iron, divided horizontally into shallow cells. These cells are partially filled with gasoline, over the surface

building, and is conducted to the various burners. When the lights are shut off the pump is at rest and no gas is made. Turning on one or more lights starts the machine in motion. It will thus be seen that the apparatus is purely automatic, making

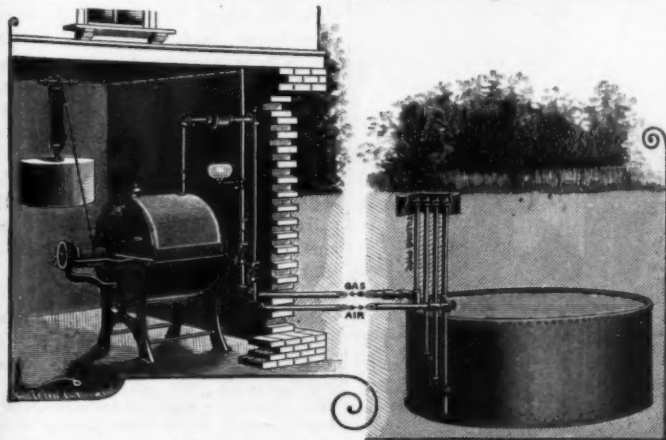


FIG. 1.—THE DETROIT GAS MACHINE.

as well as dangerous. A demand is accordingly created for gas machines, many varieties of which have been placed on the market and have found a ready sale. In purchasing a gas machine it is most important to select the one that can with certainty be depended upon for safety, durability and a steady, brilliant light.

The Combination gas machine, manufac-

of which air may pass and become impregnated with the vapors of the gasoline. In order to increase the evaporating surface, partitions of absorbent material are so placed in each cell as to form a narrow, coil-shaped passage, on every side of which is gasoline. The air passes through each of the cells in turn. The carbureter is placed outside the building and, with

only as much gas as is wanted and only as fast as it is used. The lights may be turned out, the machine left unused for a year, and it will then be found ready to light. This gas is equal to an ordinary city gas burner; averages about half a cent. per hour. Gas manufactured by this machine will not, it is claimed in most cases, exceed \$1.00 per thousand. Five gallons

in the box. The result is, first, to record the time of the visit, and second, to send an alarm to the fire department or such other place as is desired. In the same manner notice may be given of other serious trouble requiring immediate investigation. It will be seen that by this system not a second of the watchman's time need be lost, for as soon as he turns the key in the box he may leave it and at once apply himself to extinguishing the flames or other duties.



FIG. 3.—FACTORY OF THE DETROIT CO.

### The Chamberlin Screw Stump Puller.

This stump puller, an illustration of which appears herewith, is designed for pulling all classes of stumps. It has been before the public about sixteen years, and there are thousands of them in use.

The present stump machine is the result

and fastened tightly on any size root, and when the stump is drawn the toggle is so arranged that the stump can be lowered without running the lever back. A wrapping chain to wrap the stump and prevent its splitting; also a spud for making holes under the root to hitch to, and a cast-iron sledge for jarring the dirt from the stump.

The claims for this machine are: It is

packed it is on the main floor, and very easily rolled out to the loading platform. The cotton does not pass through the fan; the dust is all blown out of the house. The gins are all arranged with stopping and starting fixtures. Extra seed cotton is placed in stalls on ground floor, and delivered to the gins by extension pipes; the cotton is always fed direct from the wagon



THE CHAMBERLIN SCREW STUMP PULLER.

of twenty years' experience and trials under every possible circumstance. In the beginning almost everything was tried before the screw. Each year such alterations and improvements have been made as experience suggested. It was invented and fully tested in a section of country covered with pine timber of enormous size, whose stumps covered almost the entire surface of the ground, and were almost indestructible, resisting the action of every element, even fire. There was no way of ridding the ground of them but to pull them bodily.

It is an old idea, and one which has perplexed many an ingenious man's brain, to pull the stumps out by the roots as soon as the timber is cut and removed from around them. The records of the Patent Office show that over 300 stump-pulling machines have been made, patented and thrown aside as worthless.

It can readily be seen from the cut that the screw machine is plain and simple in construction. The machine is constructed with three legs from 12 to 18 feet high, according to the size of machine. These legs stand upright, and at the top are bolted to the head or cap. This head on the top side has a concave or bowl. Into this bowl fits the convex washer, and on top of this washer rests the nut that raises the screw. This convex washer working in the concave or bowl of the head will allow the screw to work at any angle between the legs, and still have an equal bearing in the head and a straight draft on the legs. The screw has a double thread, beveled, and has more bearing and less friction than a single square thread. Two of the legs are supplied with wheels and the third one with a shoe. On this shoe is a draw-hook, to which the horses are attached to move the machine from stump to stump, or from one lot to another. Each machine is furnished with a root chain and toggle for the purpose of hitching to the stump to pull it. The toggle is so constructed that the chain can be drawn up

so constructed that any man can work it. It pulls the largest stumps with ease. It never gets out of repair with ordinary usage. It requires only one man and a team to work it. It is not dangerous to work. It holds a stump in the best position to clean the dirt off, and the expense of stumping is the cleaning. From four to six revolutions of the horse around the machine raises the stump one foot.

For further particulars address the manufacturers, Chamberlin Manufacturing Co., Orlean, N. Y.

### The Van Winkle Cotton Gin.

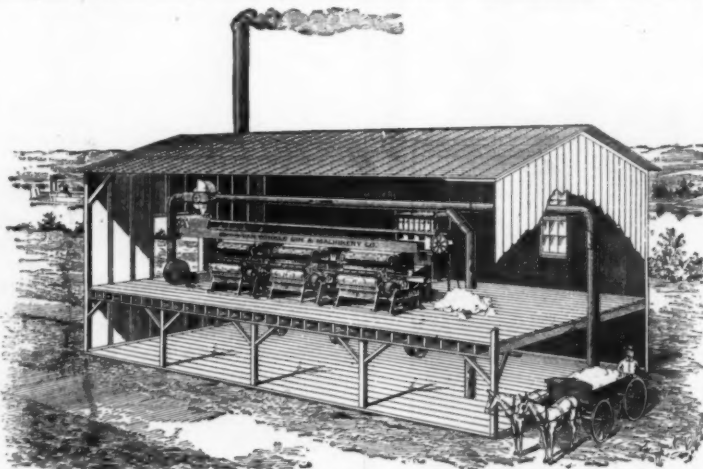
The accompanying cut shows the Van Winkle system of building gin houses, and arrangement of machinery for the greatest

to the gins without more handling.

The seed conveyors are placed on the floor for the gins to discharge in, and by another conveyor are deposited in the seed house or bin, which can be loaded from into a wagon by simply drawing a slide.

This company have built a good many large ginneries on this plan, and claim for them that they are proving perfect labor-saving conveniences and very inexpensive. Gin houses built on this plan are claimed to be much more safe against fire, and very little lint at any time is in the gin house. A steam pipe from the boiler, running along the floor in front of the condensers, with several openings, is the protection against fire.

For further particulars of machinery, &c., write to the manufacturers, Van Win-



THE VAN WINKLE COTTON GIN.

convenience in handling seed cotton to the gins and caring for the seed. The gin house proper is a building 22 feet high and 36 feet wide, and of length to suit number of gins to be used. The first floor is 8 feet 6 inches from the ground.

The presses are placed on the ground floor and pack up. When the bale is

kle Gin & Machinery Co., Atlanta, Ga., and Dallas, Texas

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South cannot find a better medium than the MANUFACTURERS' RECORD.

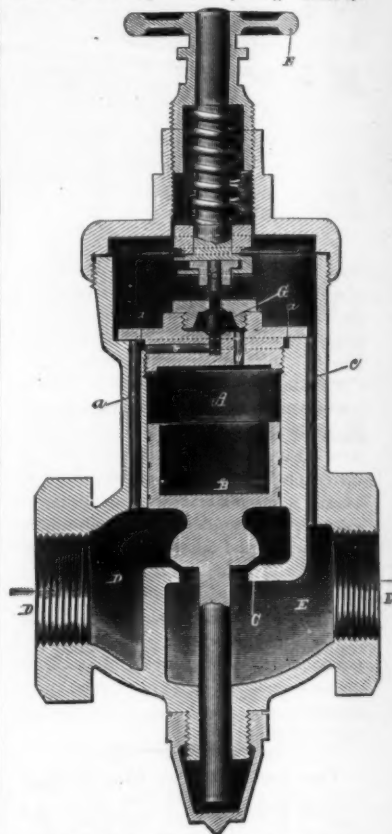
### The Locke Reducing Valve.

This valve is designed to be used where it is desirable to reduce and maintain any pressure lower than the boiler pressure.

Should the boiler pressure rise or fall it has no effect on the reduced pressure. It is useful for steam-heating coils, dry-rooms, paper-making machinery, dye kettles, steam pumps and all places, excepting slathers, paper dryers and in sugar refining, or wherever large valves are required to be operated with slight variation of pressure.

The manufacturers claim to have succeeded in divesting this class of regulators of those objectionable features which render them so unreliable and so apt to become deranged in their operation, such as small pin holes, which, when becoming clogged, prevented the valve from working, also delicate springs upon which their working depends.

In the Locke valve both the direct and exhaust passages a and c, by which the piston B of the main regulating valve C is operated, are controlled by the double valve G, which opens one passage while it



THE LOCKE REDUCING VALVE.

closes the other. By the use of the double valve G the steam passages can be sufficiently large to prevent them from clogging, besides a much more prompt and perfect action of the regulator is insured with only about one-half the change of pressure required to operate it.

The operation is as follows: Steam, being admitted to the inlet end D of the valve, presses upward on piston B and opens the valve G, causing a flow of steam through the valve and along the pipe; at the same time a pressure is produced in the chamber, under the diaphragm, by means of passage c sufficient to slightly raise the diaphragm by compressing the spring, thereby raising the small double valve G and opening a passage for admission of high-pressure steam from passage a into chamber A, thereby forcing piston B downwards and partially closing main valve C until a pressure has been obtained sufficient to balance the spring pressure upon the diaphragm which has been previously set for the desired pressure by means of screw E.

It will be observed that when the small double valve G was raised to admit the direct pressure to chamber A to close main valve C, that the exhaust passage c was closed in the same proportion as the direct passage a was opened. Manufactured by Locke Bros., Salem, Mass.



### Improved Pipe-cutting and Threading Machine.

This cut represents a pipe-cutting and threading machine of new design, for hand or belt power. It is simple in construction, combining in a compact form the best arrangements for cutting and threading pipe of large sizes by hand-power.



FIG. 1.—PIPE-CUTTING AND THREADING MACHINE FOR USE BY HAND.

It is also arranged so the pipe can be threaded and afterwards cut off, without removing any part of the machine. This machine is capable of cutting off and threading pipe up to 4 inches diameter, admitting of the use of either solid or adjustable expanding dies.

Two cranks may also be used at the same time, one on each side, thus enabling two men to work at the machine, though ample power is provided to enable one man to thread or cut 4-inch pipe. The cutting-off arrangement is fastened to the face of the large driving gear, between the gear and the die, in such a manner that either may be used without one interfering with

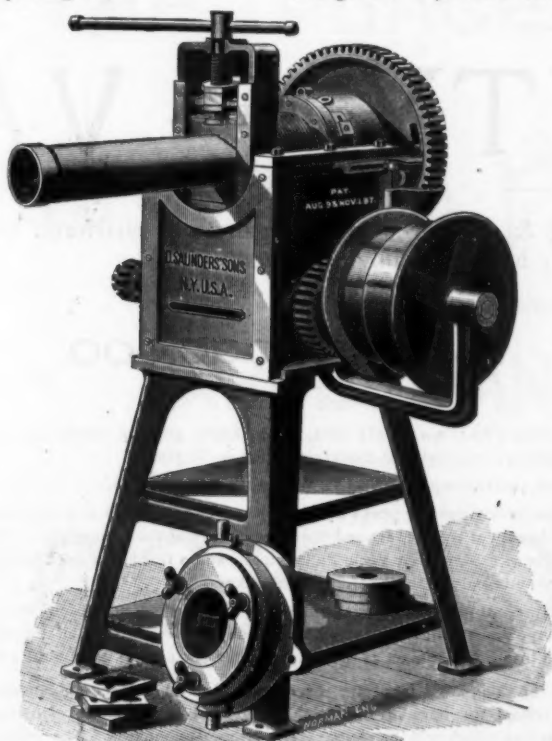


FIG. 2.—PIPE CUTTER AND THREADER FITTED FOR POWER.

The hand machine is so arranged that the relative speeds of the crank and the large gear carrying the dies may readily be changed, thus giving to the operator whatever advantage of gearing may be necessary for the size of pipe being cut or threaded. This is done simply by changing the crank from one shaft to another, three such changes being provided for.

and pawl, and a short lever which projects through an opening in the gear, and twice in each revolution comes in contact with a trip, which causes it to feed the cutting-off tool; we thus secure an automatic feed.

There is provided a universal gripping chuck on the back end of the machine for holding the pipe, to which is attached a threaded sleeve which engages with a ring

having threaded sections in it, these sections being movable by a lever, so as to be engaged with the threaded sleeve or not, as desired.

The chuck carrying the pipe is moved to and from the dies by the hand lever. In the power machine four different speeds are secured by attaching the cone pulley and pinion to the shaft by a slip bolt.

### Felt-Lined Metal Shingle.

It is claimed that the only metal shingle proper in the market is that made by Frank Randel, 97 Bridge street, Cleveland, Ohio. The attention of contractors, builders and property owners is called to these shingles. It is claimed that the felt-lined metal shingle is fire, storm and weather-proof;



FIG. 3.—CUTTING-OFF ARRANGEMENT OF PIPE CUTTER AND THREADER.

The machine is complete in all its details and adapted to a large range of work, notwithstanding which, it occupies very little floor space, is portable, so that it may

that it is light, weighing less than 200 pounds to the square; that it is positively not affected by expansion or contraction—being painted and felt lined, it is thor-



FIG. 4.—PIPE CUTTER AND THREADER FOR BENCH USE BY HAND.

be taken to where jobs are being done, or used to advantage in the shop.

D. Saunders' Sons, Yonkers, N. Y., are the manufacturers

THE D. F. Morgan Boiler Co., of Akron, O., have moved into their new shops, and have put in a large quantity of new and improved machinery, which is now in full operation. They have also largely increased their working force, all being experienced and practical men, whereby they are enabled to turn out a large number of boilers. Orders have been coming in very freely, and the prospects are that they will have a large and successful business. The Cobb Heating Co., of 48 Centre street, New York city, and 23 West Lake street, Chicago, are their general Eastern and Western agents, and catalogues and other information can be obtained either from them or the home office in Akron, O.

oughly protected against condensed moisture reaching the under side of the metal, and that it is easily and rapidly laid, and requires no skilled labor in its application. It is properly a metal shingle, 10x18 inches, laid 8 inches to the weather, giving a double thickness of metal, making a solid and compact roof. It is the cheapest when compared with other sheet metal roofing. The patent right for the whole United States on this shingle is for sale. For further particulars address Frank Randel, 97 Bridge street, Cleveland, Ohio.

HEESON BROS. & Co., Tecumseh, Mich., manufacturers of the Wolverine hog ringer, have recently bought a cupola from Byram & Co., of Detroit, Mich., for their new foundry. This firm have over 4,000 square feet of ground space for their works and have recently added a foundry for the manufacture of light grey iron castings.

# FOR SUCH INDUSTRIES AS

COTTON MILLS,  
WOOLEN MILLS,  
TANNERIES,  
BOOT AND SHOE FACTORIES,  
HARNESS AND SADDLE FACTORIES,  
FURNITURE FACTORIES,  
CARRIAGE AND WAGON FACTORIES,  
FLOUR MILLS,  
GRIST MILLS,  
CRACKER FACTORIES,  
CANNING FACTORIES,  
COTTON-SEED OIL MILLS,

# DALLAS, TEX.

Is equal to any locality  
in America in its  
combined advantages of

**CHEAP AND  
ABUNDANT  
RAW MATERIAL  
READY,  
PROFITABLE  
AND EXPANDING  
MARKET.**

**DISTRIBUTING FACILITIES,  
ELIGIBLE SITES  
GOOD CLIMATE.**

Any worthy industries  
will be aided liberally by the

## DALLAS MANUFACTURERS' AID & IMPROVEMENT CO.

711 Main Street, Dallas, Texas.

## BEDFORD CITY LAND & IMPROVEMENT CO.

# BEDFORD CITY, <sup>LAT</sup> LIBERTY, VA.

By special act of the Legislature of Virginia the Bedford City Land & Improvement Company was chartered with the most liberal grants of power. The company has been fully organized.

**AUTHORIZED CAPITAL - - - \$1,000,000.**

**JAS. M. BERRY**, (of Berry Bros., Tobacconists,) **President.**

**R. B. CLAYTOR**, (of R. B. Claytor & Co., Merchants) **Vice-President.**

**J. LAWRENCE CAMPBELL**, (of Burks & Campbell, Attorneys-at-Law,) **Secretary.**

**S. M. BOLLING**, (of Bolling, Wright & Co., Tobacconists,) **Treasurer.**

### BOARD OF DIRECTORS:

MARTIN P. BURKS,	R. B. CLAYTOR,	J. M. BERRY,
C. W. WHARTON.	J. LAWRENCE CAMPBELL,	T. D. BERRY,
S. M. BOLLING.	SAMUEL GRIFFIN,	W. W. BERRY,
DR. W. W. SMITH, President of Randolph-Macon College,		
REV. A. E. DICKINSON, D. D., Editor of the Religious Herald, Richmond, Va.		

The Company is solvent and its business is conducted on the soundest business principles. It is not engaged in wild booming.

Only \$300,000 worth of stock has been offered to the public.

The Company owns nearly 800 acres, containing the best residence, business and manufacturing sites. The stock which is offered is in ten-dollar shares, payable \$2 per share cash when subscribed, \$1 each thirty days thereafter, until \$5 is paid on the share. For this the Company issues paid up non-assessable certificates of stock. The money thus raised is to be applied to the improvement of the property.

Bedford City is not an old field, but a thrifty, growing community, in the most healthful and beautiful mountain region in Virginia.

Mean yearly temperature 53.7; Winter, 44; Summer, 78.

A few miles from the peaks of Otter, it would be difficult to exaggerate the exquisite beauty of the scenery and the tonic quality of the atmosphere. Within a days ride of Boston, New York, Philadelphia, and a few hours from Baltimore, it presents unusual advantages for health seekers.

The present population is nearly 4,000. There are 30 manufacturing enterprises, large and small, in operation, and 10 new secured with capital provided, which go into work as soon as buildings can be put up and the plants erected.

On the Company's lands are the elegant Randolph-Macon Academy, the largest school for boys in the South, and the Jeter Memorial Institute for young ladies, which will be commenced within six months. The Norfolk & Western R. R. Co. will build a fine passenger depot near a first-class hotel, to cost \$75,000. Poindexter, the architect of the Academy, is now preparing plans.

The Bedford City Company offers the most beautiful residence sites in the western part of the town, in which direction it is rapidly building.

This is the safest and best investment offered anywhere in Virginia. It is a golden opportunity to get property in a splendid section, as rich in minerals as it is healthful and magnificent in the grandeur of its mountains.

A new railroad from Glasgow to Atlanta will be built. Its construction will begin this year. For further particulars address

**J. M. BERRY**, President of Bedford City Land & Improvement Co., Bedford City, Va



For Sale in Alexandria, Virginia.

## LAND AND BUILDINGS

Suitable for a large manufacturing business of any kind.

This property consists of over ten acres of land, having an available water front on the Potomac River of over 1,050 feet, with a uniform depth of over 20 feet. Also, several buildings, one of which, a five-story brick building 160x80 feet, was built and used as a flouring mill. Another brick building was built and used as a machine shop. There are also six tenements and a brick office building.

Alexandria is well adapted to almost any manufacturing business and is only six miles from Washington. There are five railroads running to the city—the Baltimore & Ohio, the Richmond & Danville, the Virginia Midland, the Washington & Western and the Shenandoah Valley railroads—giving direct connection with the coal and iron fields of Western Virginia. This property is connected with all these railroads by a belt line in the city. By this means coal, iron and lumber can be readily obtained and at lowest cost. Labor is cheap, rents and taxes are very low. The property is particularly suitable for a steel ship-building plant. There is not a better location on the whole Atlantic Coast. The property will be sold at a great bargain in order to close two estates having a large interest in it.

For particulars and terms apply to

**JOHN W. GREENE, Alexandria, Va.**

Or to CHAS. E. MOODY, 77 Commercial St., Boston, Mass.

Six Trunk Line Railroads at

## BESSEMER

In the heart of Mineral Alabama, encircled with hills of Coal, Iron and Limestone Rock.

"The South is the coming El Dorado of American adventure. May the Almighty speed and guide her onward progress!" So wrote the Hon. W. D. Kelley, M. C., of Pennsylvania, a few months ago, and every day brings forth new evidence to prove the correctness of his prediction and to show that without a doubt the South is to be the richest country upon the globe. In climate, soil, mineral and timber wealth, in rivers large and small, in a long seacoast, in abundant rainfall, in healthfulness and in every other advantage that could be asked nature seems to have done her best for this favored land. The wealth in iron and coal is beyond estimate. Of timber there is an unlimited supply, including nearly every variety of hardwoods for woodworking purposes.

WHERE  
MONEY  
WILL  
GROW!

Seven Furnaces, output 1890, 250,000 tons; Rolling Mill, 100 tons daily; Fire Brick Works, 25,000 daily; Many Lesser Industries

Offers Thirty Varieties of Hardwoods for Woodworking Industries.

11,000 City Lots For Sale.

**The Bessemer Land & Improvement Co.**

this new year, are prepared to deal liberally for the founding of Iron and Woodworking industries in this growing Mining and Manufacturing Center.

**H. F. DeBARDELEBEN, Prest.**

**H. M. McNUTT, Secretary.**

## THE PLACE FOR FACTORIES.

# THE ROANE IRON CO.

WILL BUILD UP A

\* **LARGE MANUFACTURING CITY** \*

AT

# ROCKWOOD, TENN.

AND IS PREPARED TO OFFER SUBSTANTIAL INDUCEMENTS TO MANUFACTURERS.

○—AS TO RESPONSIBILITY OF THIS COMPANY, PARTIES ARE REFERRED TO EITHER DUNN OR BRADSTREET.—○

FOR PARTICULARS ADDRESS

**ROANE IRON CO., Rockwood, Tenn**

# SUMTER

## South Carolina,

is situated in Sumter county, midway between Florence and Columbia—40 miles from each—95 miles from Charleston, 125 from Augusta, Ga., and 136 from Wilmington, N. C., in the heart of an

### EXCELLENT AGRICULTURAL COUNTRY.

It is on the Wilmington, Columbia & Augusta Railroad, and is the terminus of the Central of South Carolina as well as present terminus of the Eutawville Railroad, which is in course of construction to connect with railroads from Norfolk, with prospects of another in the near future.

It has a rapidly-increasing population, which at present numbers about 4,000.

### ITS HEALTH IS UNSURPASSED

and it is one of the finest locations in the South for a

## Winter Resort

for those seeking refuge from the cold blasts of the North.

A \$50,000 HOTEL is now under discussion, and any reliable hotel man who would like to engage in the undertaking can learn of something to his advantage by addressing Mayor Mood.

## ICE FACTORY

is wanted: an Electric-Light Plant is now being put in, and Water Works are in progress.

Those seeking locations for

## HOMES

or business will do well to correspond with the agents of Sumter

## West Salem Land Co.

SALEM, VA.

Authorized Capital, \$500,000

OFFER STOCK IN

Series C, New Castle Series.

SHARES \$10

PAR VALUE.

ARE SOLD TO SUBSCRIBERS AT \$5.

Payable, One Dollar When Subscription is Made, and One Dollar Each June 1, July 1, August 1 and September 1; at which time Certificates of Stock will be issued, declared Fully Paid up and Non-assessable.

The town of New Castle (or Craig City) is the county seat of Craig county, Va., and lies midway between the Chesapeake & Ohio Railroad at Eagle Rock, and the Norfolk & Western at Salem, Va. A branch of the Chesapeake & Ohio Railroad is now being built to New Castle, which will be completed about Sept. 1, 1896. This road will open up the richest mineral region of Virginia, and cause great development of resources and consequent enhancement of values.

The property belonging to this series will be divided into about 600 business and residence lots, and will be sold for the benefit of the stockholders. Applicants for stock in series C will please remit \$1 per share to the West Salem Land Company at Salem, Va.

GEORGE ALLEN, President.  
C. C. TOMPKINS, Secretary.

## A Splendid Opportunity

## I HAVE FOR SALE

—THE—

## HUCKABEE

## Mineral Tract,

Embracing 4,000 Acres in One Body.

Lying on Little Cahaba River, near Brierfield, Bibb County, Ala.

Ore, marble and limestone of best quality and inexhaustible quantity and the finest timber are found on these lands, and there is manganese in workable deposits. Coal is abundant, railroad facilities ample, and the proximity to rich cotton lands justifies a cotton factory, thus affording everything necessary to establish a successful industrial town

Mr. Robert L. McCalley, a well-known mineralogist, writes of these lands as follows: "There is no other place in Alabama where iron ore, coal, marble, limestone, timber and sand are in such proximity and abundance. Besides every material necessary for the manufacture of iron, magnificent water power is furnished by the Little Cahaba River. This will be very valuable in sawing and quarrying the stone, and a fine marble business can be established and successfully operated. The fragments of the stone can be used as flux at Bessemer, 23 miles north, Birmingham, 32 miles north, and Brierfield Furnace, 3 miles east. Within one mile from the Huckabee lands are veins three to eight feet thick, producing the best fuel and coking coal in Alabama."

Within a few miles there are six lines of railroad, the nearest being the Brierfield Standard Gauge Railroad, two miles distant, and the L. & N. branch at Blocton, three miles distant.

This tract is in a healthy locality. I offer it for

**\$20 an Acre, Cash.**

For further information, address

**S. F. NUNNELEE, Agent,**

ANNISTON, ALA.

# DENISON,

TEXAS.

THE

Future Manufacturing and Commercial Center

OF THE

GREAT SOUTHWEST.

DENISON SUPPLIES THE COAL FOR TEXAS.

She has at her gates the only **COKING COAL** of any value in the Mississippi Valley. To the Southwest lies the best **MAGNETIC IRON ORE** in the world, while to the north and Southeast are fields of **BROWN HEMATITE ORE** of the finest grade. These ores must meet the **COKE** and **COAL** at **DENISON** and there to be worked.

**DENISON** cannot be surpassed for **HEALTHFULNESS** and **BEAUTY** of location. Six divisions of railways terminate at Denison and are operated by her citizens.

**DENISON** has an abundant supply of pure, soft water and plenty of good, cheap **BUILDING MATERIAL**.

The attention of investors and those seeking advantageous locations for business or for manufacturing plants is invited to the opportunities presented at Denison.

**MUNSON & BRO. HAVE SUPERIOR FACILITIES FOR THE SAFE AND PROFITABLE INVESTMENT AND HANDLING OF CAPITAL.**

For information about **DENISON** and for bargains in **BUSINESS** and **RESIDENCE PROPERTY**, **ACRE PROPERTY** and **FARMS NEAR THE CITY**, write or call upon

**MUNSON & BRO.**

301 WOODWARD STREET,

DENISON, TEXAS.

# REAL ESTATE

FOR

## Investment or Speculation.

One of the Most Solid and Substantial of all the Southern Towns is

## BRISTOL, TENN.

It is in the center of the richest mineral, timber and agricultural sections of the South—East Tennessee and Southwest Virginia.

It is becoming an important railroad center.

It has now a population of **10,000**, which is increasing every day.

It has in the **HOTEL FAIRMOUNT** one of the handsomest and most thoroughly equipped hotels in the South.

It has in operation car shops, planing mills, foundries, woolen factory, cotton factory, carriage factory, veneer factory, canning factory, planing mills, brick-yards, &c. An iron furnace to cost \$300,000 has been contracted for.

The climate of Bristol makes it a natural sanitarium the year round.

There is no better place in the South for profitable real estate operations.

Some of the best business, residence and suburban property in the town is controlled by

**W. A. R. ROBERTSON,**

**Real Estate Agent.**

Write to him for details. He is giving particular attention now to two or three special things that will pay big profits on short turn.



## Standard Land Co.

INCORPORATED.

CATLETTSBURG, KY.

Has for sale valuable Timber, Coal and Iron Ore Lands in Kentucky, West Virginia and Virginia, -cheap. Write for descriptive list.

### To Those Looking For MANUFACTURING SITES IN THE SOUTH

The most desirable locations in the South for manufacturing wagons, stoves, agricultural implements, furniture, or for foundries, machine shops, rolling mills, muck bar mills, nail works, glass works, cotton or woolen mills, and tanneries, are to be found in Virginia along the line of the Norfolk & Western Railroad from Norfolk to Bristol, and upon its branch lines. Hard wood of every variety; pig iron from the furnaces at Lynchburg (2), Roanoke (2 in operation and 1 now under construction), Pulaski (1), Ivanhoe (1), Radford (1, to be built in 1890), Salem, Graham Max Meadows and Bristol (1 at each point now under construction), bar iron from the rolling mills at Roanoke, Lynchburg and Richlands (1 to be built in 1890); coke and semi-bituminous coal from the Pocahontas Flat Top field; superior gas coals from the mines on the Clinch Valley Extension; glass sand from Tazewell county; cotton from the markets of the Southern States, and wool from all the Western and South-western States and Territories at advantageous freight rates. Favorable freight rates made upon raw materials to all factories established upon its line, as well as to points in the United States and Territories upon the manufactured articles.

Those seeking new fields for manufacturing establishments should not fail to investigate the wonderful development of iron, coal and coke industries that has been made within the past five years along the line of the Norfolk & Western Railroad, and the advantages offered by the State of Virginia in the supply of cheap raw materials; by the Norfolk & Western Railroad in the matter of freight facilities and rates upon raw materials and for reaching home, far distant and foreign markets, and by the cities and towns along its line in the way of advantageous sites at moderate cost. Many of the cities and towns exempt manufacturing establishments from taxation for a series of years.

For further information as to freight rates and sources of supply of raw materials, apply to A. Pope, General Freight Agent, Roanoke, Va., or to

**CHAS. G. EDDY,**  
Vice-President, Roanoke, Va.

## RADFORD, VA.

Town Lots, Mineral, Timber and Farm Lands.

We have many large and small tracts.

Iron Ore, Coal, Glass, Sand, Marble, Building Stone, and Several Mineral Springs, of Wonderful Curative Properties.

The best of farming and grazing lands. No malaria. No mosquitoes. Salubrious climate. Gorgeous scenery. Water power unlimited. Factory sites donated. Property at first hands, so get in on "rock bottom." Write to or call on

**KEARSLEY, BARCLAY & CROCKETT,**  
The leading Real Estate Agents of Southwestern Virginia, RADFORD, VA.

## R. K. WRIGHT, JR. Real Estate and Insurance

GRAHAM, Tazewell Co., VA.

REPRESENTING

Graham Land & Improvement  
Co. and Niagara Fire Insurance Co. of N. Y.

## JOE H. BUSBEY REAL ESTATE

—AND—

## Investment Agency, TREDEGAR

(P. O. Jacksonville, Calhoun County, Ala.)

Correspondence solicited.

### TOLCHESTER BEACH.

This Beautiful and Popular Resort, with its World of Amusements and Attractions, will open June 1st. Good Hotel, Moderate Prices. Famous Meals. 50 cts. Music by the Baltimore Light Infantry Band. The favorite and popular steamer LOUISE, from Pier 16 Light street daily at 8.15 A. M. and 2.30 P. M. Sunday 9 A. M. and 2.30 P. M., returning to the city at 8.30 P. M. Excursion tickets at the boat 50 cents. Children between 6 and 12 years, half fare. **GOOD MEALS 50 CENTS.** Special inducements and very low rates to Schools and Societies. Apply early to **TOLCHESTER OFFICE.**

## PEN-MAR.

MORE ENCHANTING THAN EVER.

OPENED FOR THE SEASON  
**Wednesday, June 18, 1890.**

Reserved seats on excursion train can be secured at W. M. R. R. Ticket Office, 205 East Baltimore Street without extra charge.

Enjoy a Delightful Jaunt in the Mountains

Visit **HIGH ROCK,**  
**MT. QUIRAUK, BRINKWOOD,**  
**GLEN AFTON and RAGGED EDGE.**

Round Trip \$1.00; Children 50 cts.

**THE GOODRICH LINE STEAMERS**  
Pleasant Excursions  
AT LOW RATES  
ON THE  
Magnificent Steamships  
OF THE  
**Goodrich Transportation Co.**

Running to all the Principal Ports and Summer Resorts on Lake Michigan and Green Bay. Parties laying out their plans for a summer outing will do well to look over our list of Routes and Rates. No more desirable trip can be taken than that on the Green Bay Route. Nine hundred mile ride along the beautiful coasts of Northern Wisconsin and Michigan and Green Bay. Fare for the trip only \$14.00, meals and berth included. Our magnificent new fast Steamship "INDIANA" is now in her place in the day service between Chicago and Milwaukee, leaving Chicago daily, except Sunday, at 9 A. M., arriving at Milwaukee at 3.30 P. M. Twice daily for Racine & Milwaukee 9 A. M. & 5 P. M. Daily for Ludington and Manistee 9 A. M. (Saturday boat leaves at 8 P. M.) Daily for Sheboygan and Manitowoc 8 P. M. Daily for Gd. Haven, Muskegon, Gd. Rapids 7 P. M. For Keweenaw, Sturgeon Bay, Menominee, Escanaba and Bay Ports, Monday, Wednesday and Friday 8 P. M. For Green Bay, Gladstone, Manistique and Way Ports Tuesday at 7 P. M. \*Sunday excepted. Office and Dock foot Michigan Avenue. For further information regarding routes and rates of fare call on or address (office foot of Michigan Avenue) **JOHN SINGLETON, Gen. Pass. Agt.**

## E. DeF. SHELTON, Representing CITIES AND TOWNS in the Locating of Manufacturing Enterprises.

We represent a limited number of cities and towns throughout the country, varied in their facilities, and with unusual advantages for manufacturing in all branches, and offering liberal inducements for the location of manufacturing industries. Investigate before you start or relocate your factories.

**E. DeF. SHELTON,**

57 BROADWAY, NEW YORK.

No Charge for Information Furnished the Manufacturer by this Agency.

## HOTEL LUCERNE

J. HARRY CHAPMAN, Proprietor, Maj. J. P. LONGLEY, General Manager.

## SALEM, VA.

SPECIAL ATTENTION PAID TO TRANSIENT GUESTS.

ACCOMMODATIONS FIRST-CLASS.

Fine Sample Rooms for Drummers.

Rates Reasonable.

## Mineral Lands, City Lots,

GRASS, GRAIN AND FRUIT FARMS FOR SALE.

ADDRESS

**F. J. CHAPMAN, - - Salem, Va.**

## FRANK RHONER & CO.

—MANUFACTURERS OF—

## Parlor & Hall Furniture

Call and See Our Stylish Goods at Popular Prices.

Call and See Our Goods in Gilt and Old Silver.

WAREHOUSE: 437 E. 22d ST., NEW YORK, bet. Ave. A and First Ave.

## Attention, Hardware Dealers.

Send for Circular and Price List of the

WOLVERINE HOG RINGER, the Best Ringer on the Market.



THE WOLVERINE  
Hog Ringer  
Rings  
MANUFACTURED BY  
HOGGINS & CO., TROY, N.Y.

## WIER & WILSON,

DIRECT REPRESENTATIVES:

HUBBARD & Co., Axes, Shovels, Hoes and Saws.  
AMERICAN SCREW COMPANY, Screws, Bolts, Wire Nails, &c.  
A. FIELD & SONS, Tacks and Nails.  
WHEELING HINGE COMPANY, Wrought Goods, Butts, &c.  
L. D. FROST & SONS, Philadelphia Carriage Bolts.  
JOHN SOMMERS' SON, Faucets.  
NICHOLSON FILE CO., Files.  
HARTFORD HAMMER CO., Hammers and Sledges.  
THE HENRY C. HART MFG. CO., Screen Frames, Spring Hinges, &c.  
SHEBLE & KLEMM, Forks.  
HOLROYD & Co., Stocks and Dies.  
CLARK BROS. & Co., Bolts, Nuts, etc.  
BRANFORD LOCK WORKS.  
WHITE MOUNTAIN FREEZER CO.  
BLAIR MFG. CO., New, Easy and Bay State Lawn Mowers.  
WINCHESTER HANDLE CO., Fork, Shovel, Hoe Handles.  
SAMSON CORDAGE WORKS, Braided Sash Cord, etc.  
OLD DOMINION IRON & NAIL WORKS CO. Walker's Horse and Mule Shoes.  
PLUME & ATWOOD MFG. CO., Copper Rivets, Jack Chains, Lamps, etc.  
JOHN C. SCHMIDT & Co., Trace & Coil Chain.  
EXCELSIOR HOOK & BACK BAND CO.  
NEW SCOTT MFG. CO., Fruit Parers, etc.  
KLINE, LOGAN & Co., Picks, Mattocks, etc.  
RIVER FOUNDRY CO., Lull & Porter Hinges, Pulleys, etc.

OFFICE—No. 14 W. German St., BALTIMORE, MD.

Look Carefully through this paper and you may find an advertisement of some machinery or other goods that you are in need of. Preserve this copy for future reference.

# THE WASHINGTON HYDRAULIC PRESS BRICK COMPANY,

MANUFACTURERS OF

Ornamental and Plain Front Pressed Brick in Red, Brown, Gray and Buff Colors, also Rock-Faced and Roman Brick.

Brick for Arches Ground to any Radius.

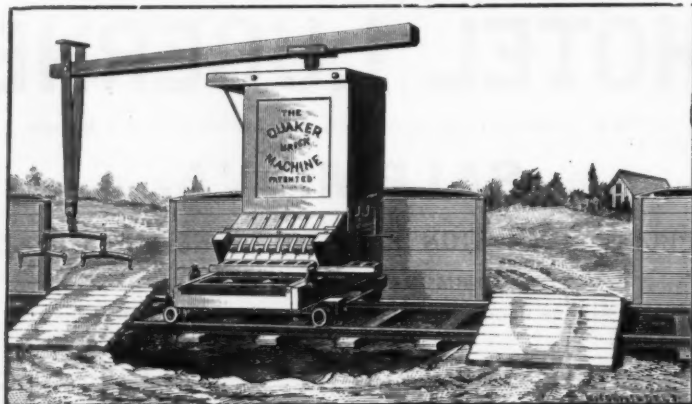
Correspondence and Inspection of Works Solicited.

OFFICE: Kellogg Building, Washington, D. C.

Works at Waterloo Va.

## Improved Brick Machinery

AND BRICK MAKERS' SUPPLIES.



THE NEW QUAKER HORSE-POWER BRICK MACHINE,

Capacity 15,000 to 20,000 per day.

Steam-power 25,000 to 40,000 per day.

Spiral Pug Mills, Mold Sanding Machines, Molds, Barrows, Trucks, &c., &c. We contract to furnish and Equip Complete Yards, Engines, Boilers, Shafting, Pulleys, Belting, &c., &c. Send for illustrated Catalogue. Correspondence Solicited.

FLETCHER &amp; THOMAS, Indianapolis, Ind.

## Chambers' Brick Machinery



15,000, 25,000, 50,000 per day Capacity.

GUARANTEED AND FURNISHED ON THIRTY DAYS' TRIAL.

CHAMBERS BROS. CO., Philadelphia, Pa.

8 DIFFERENT KINDS. **BRICK MACHINES** CAPACITY 10,000 to 100,000 PER DAY. Full FACTORY OUTFITS. SELF-LOADING TRUCK.

DUMP CARS. PUG MILLS. ELEVATORS. THE LATEST & BEST INVENTIONS. CLAY CRUSHERS. WINDING DRUMS. RE-PRESSES.

THE FREY, SHECKLER COMPANY, BUCYRUS, OHIO, U.S.A.

**BRICK-MAKER'S SUPPLIES**

TRUCKS MOLDING BARROWS & MACHINES FOUNDRY WORK

G. W. RAYMOND & CO. DAYTON, O.



Send for Illustrated Catalogue.

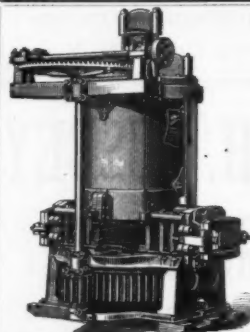
Mention Manufacturers' Record



### Brick and Terra Cotta Machinery

Steam Saver Pipe Press & Dry Pans for Grinding Clay, Wet Pans for Tempering Clay, Pug Mills and Engines. Complete Outfits.

STEVENSON &amp; CO., Wellsville, O.



## Brick Machinery

Capacity 15,000 to 100,000.

Pug Mills, Crushers, Elevators, Etc.

Full Outfits a Specialty. Satisfaction Guaranteed.

ADDRESS

J. W. PENFIELD &amp; SON

WILLOUGHBY, OHIO, U. S. A.

**Stevens Patent Spring Dividers | Reliable Inside Calipers.**

With Thumb Attachment. Price, by mail, postpaid.

3 inch.....	\$1.15
4 ".....	1.40
5 ".....	1.50
6 ".....	1.75

**TOOLS.**

With right and left hand screw. These Calipers have two tension screws added, thereby removing all back lash, making them perfectly reliable. 3 inch, price per pair .....\$1.25

Ideal Surface Gauges, Depth Gauges, Ideal and Leader Spring Dividers and Calipers, and Fine Machinists' Tools. Illustrated catalogue free to all.

J. STEVENS ARMS & TOOL CO., P. O. Box 215 Chicopee Falls, Mass.

## Chattanooga Paint Company, CHATTANOOGA, TENN.

Manufacturers of the

BEST OXIDE OF IRON PAINT MADE IN THE UNITED STATES.

Over 18,000 tons made since 1880, 3,000 tons made in 1888. Over 500 certificates regarding its qualities. Either dry or mixed ready for use.

SEND FOR PRICES DELIVERED AT POINT OF DESTINATION

## IRON CLAD PAINT CO., Cleveland, O.

Factory, 75 &amp; 77 Central Way. JAMES WADE, Sec. &amp; Treas., 3 Case Bldg.

ORDER DIRECT FROM THE

Iron Clad Paint Co.

And get the genuine article, and save liability of suit for using an article made in violation of the patents issued to Wm. Green, and now owned by this Company.

IRON-CLAD PAINT is the most durable, most fire-proof and cheapest Paint made.

FURNISHED both Dry and Ground in Oil.

USED BY NEARLY ALL THE RAILROADS.

Trade Mark Patented Paint Pre-vented.

ESTABLISHED 1847.

**BALTIMORE MILL FURNISHING WORKS.**

**B. F. STARR & CO.**

BALTIMORE, MD.

MANUFACTURERS OF

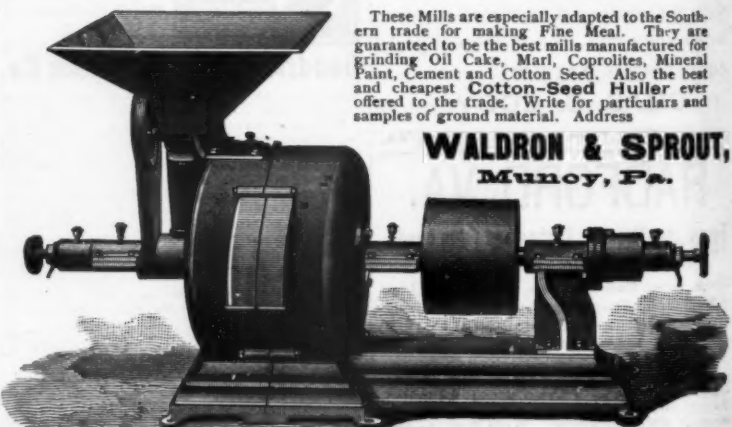
**BURR STONES FOR ALL PURPOSES.**

Portable Mills, Roller Mills, Smut Machines, Shafting, Pulleys, Gearing and General Mill Machinery.

Importers of Bolting Cloths and General Mill Furnishings.

The Leading Mill Furnishing House on the Atlantic Seaboard.

## FRENCH BURR MILLS,



These Mills are especially adapted to the Southern trade for making Fine Meal. They are guaranteed to be the best mills manufactured for grinding Oil Cake, Meal, Coprolites, Mineral Paint, Cement and Cotton Seed. Also the best and cheapest Cotton-Seed Huller ever offered to the trade. Write for particulars and samples of ground material. Address

**WALDRON & SPROUT,**  
Muncy, Pa.

Manufacturers of French Burr Mills, Flour Bolts, Corn Meal Sieves, Wheat Sowers and Cleaners, Corn Ear Crushers, &c.



J.W. SHINGLE, President.

J. HODGINSBERG, Secy.

L. H. KESSELMAN, Vice Pres.



**THE CONSOLIDATED  
ICE MACHINE CO.**

MANUFACTURERS OF  
**ICE MAKING  
AND  
REFRIGERATING MACHINERY.**

BRANCH OFFICE  
EAST 18TH ST.  
NEW YORK

ESTIMATES  
AND  
CIRCULARS  
UPON  
APPLICATION

WEST 18TH ST. VIADUCT  
CHICAGO, ILL.

# 246 MACHINES

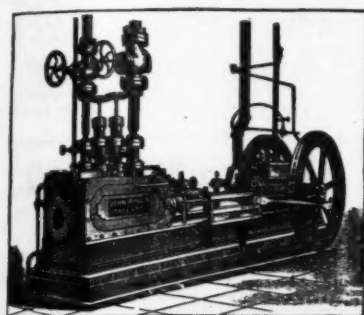
IN OPERATION

Making Ice—Refrigerating, Breweries, Packing Houses, Cold Storage Houses, Oil Refineries, Creameries, Hotels, &c.

**BUY THE BEST AND SAVE MONEY.**

All machines built by us are made to gauge and templet. Highest economy secured. Best results obtained. Machines in steady operation for more than ten years.

**NO FAILURES.**



## FOR Ice-Making and Refrigerating MACHINERY,

Sizes 5 tons and upwards to 100 tons.

ADDRESS THEM

**Rine Refrigerating & Ice Machine Co.**

OFFICE:

218 CHAMBER OF COMMERCE,  
ST. LOUIS, MO.

L. H. BECK, President.

INO. CAREY, Secy. &amp; Treas.

W. COOK, Superintendent.

## ATLANTA MACHINE WORKS,

MANUFACTURERS OF

## The Cook Improved Absorption Ice Machine

Boilers, Tanks, Smoke Stacks, Shafting, Hangers, Pulleys,  
Saw Mills, Mill Gearing.

**GOLD MINING AND STONE-WORKING MACHINERY.**

ATLANTA, GA.

## Castle Automatic Absorption Ice Machine.

Uses but 210 degrees of heat in the retort, saving all the water for cooling the gas and the weak liquor from 320 degrees down to 210 degrees, and uses none for the absorber. Small machines are complete on heavy-cast foundation plate. Automatic in operation. **Warranted High-Class and Positive.** Hotels, creameries, &c., can make their own ice or refrigerate without additional help. Sizes 500 pounds to 10 tons per 24 hours.

**CASTLE ENGINE WORKS, Indianapolis, Ind.**

## ICE MACHINE PAINT.

Made expressly for use on all surfaces of either wood or metal coming in contact with water, acids, ammonia, heat or cold. A DURABLE PAINT AT REASONABLE COST.

**METALLIC PAINT for Roofs, Barns, Fences and all Exposed Surfaces.**

Write for circulars and prices. Manufactured only by

**A. F. BOUTON & CO., 118 Gansevoort St., N. Y.**

## Menasha Hard Wood Pulleys.

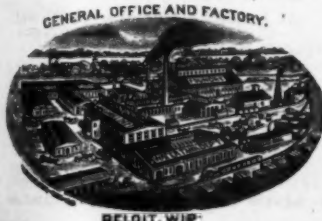


We are sole makers of hardwood bent rim, oak spoke arm Pulleys; gripped to shaft with bolts, and using patent paper bushings. They can be put onto shaft without taking it down or cutting keyseats. No glue or nails used in their construction. Hub with bushing fits any size of shaft.

Also sole makers of only small Split Pulley 1 inch to 8 inches in diameter, in the market. See above cuts of them. No glue or nails in them. No Keyseats to cut. Also sole makers of only Hickory Hanger in the market; it has iron box. Send for illustrated circulars and discount.

**MENASHA WOOD SPLIT PULLEY CO., Menasha, Wis.**

Branch Houses: Hoen & Von Kapff, Baltimore, Md.; Lodge & Davis Mach. Tool Co., New York City; H. N. Bates & Co., Boston; Chas. A. Turner, Pittsburg, Pa.; Greene & Wood Mfg. Co., Philadelphia; W. D. Allen & Co., Chicago and Minneapolis; E. L. Cole, New Orleans, La.; Thos. J. Bell & Co., Cincinnati; L. M. Rumsey Mfg. Co., St. Louis.



GENERAL OFFICE AND FACTORY.

BELOIT, WIS.

## ECLIPSE FRICTION CLUTCH PULLEYS AND CUT-OFF COUPLINGS.

SEATTLE, WASHINGTON TER., 5 25, 1899.

Eclipse Wind Engine Co., Beloit, Wis.

DEAR SIR: The Clutch Pulley (diam. 108 in., face 21 in) works satisfactorily in every particular, and is a great convenience. We have two, and can stop either the main saws or the gang edger, or both whenever desired, without stopping the engines.

Yours respectfully,  
Yealer Wood, Coal & Lumber Co.,  
J. D. Lowman, Secy.

**ECLIPSE WIND ENGINE CO., - Beloit, Wis.**

Send for July, 1899 catalogue, and see where and by whom they are

## ARCTIC ICE MACHINE

Manufacturing Co.

CLEVELAND, OHIO.

OFFICE AND WORKS,

4, 6, 8, 10 WEST ST.,

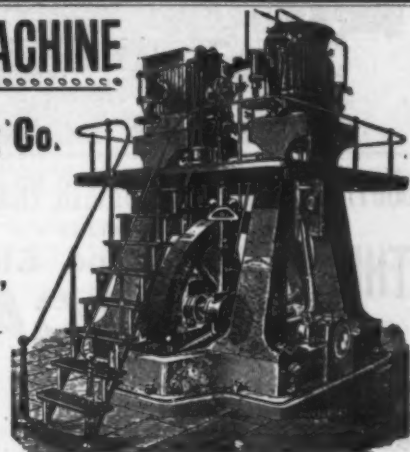
P. O. Box 92

OUR OWN SHOPS.

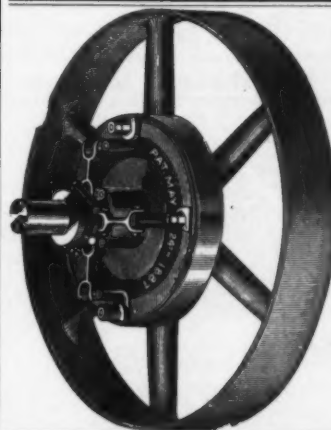
MACHINES CARRIED IN STOCK

AND ORDERS

PROMPTLY EXECUTED.



Largest Arctic with Corlies Engine



## The MOORE & WHITE CO

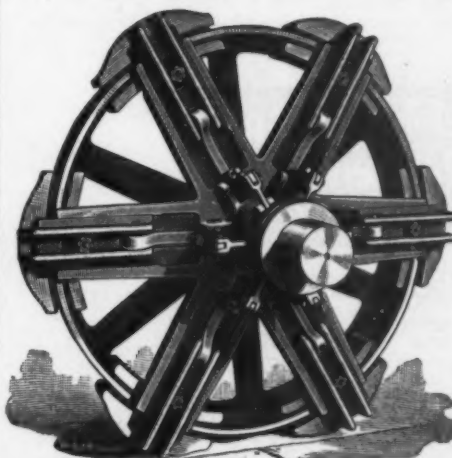
1312 Buttonwood St., PHILADELPHIA, PA.

**Friction Clutches,**

**Cut-Off Couplings, &c.**

**Paper Mill**

**Machinery, &c.**



COPYRIGHTED BY H. W. HILL, 1898.

## HILL Clutch Works, CLEVELAND, OHIO.

NEW YORK:

11 CONTLANDT STREET.

CHICAGO: MINNEAPOLIS:

30 S. Canal Street. 305 Kasota Bldg.

KANSAS CITY, MO.:

1221 Union Avenue.

## POWER PLANTS

Designed, Erected and Furnished.

Send for new Catalogue, Power Transmission Machinery.



# The STILLMAN,

## CLEVELAND, OHIO.

Cuisine and service equal to the best New York hotels. Business men and tourists will find "The Stillman" quiet, elegant and homelike. Caters to the highest class of patronage at reasonable rates. **ONLY FIRE-PROOF HOTEL IN CLEVELAND.** Every Room Heated by Steam and Lighted by Electric Light. Elegant suites can be secured by addressing **J. WARREN COLEMAN, Jr., Manager.**



Hotel Fairmount

# Hotel FAIRMOUNT

## BRISTOL, TENN.

RECENTLY COMPLETED. A SUPERB HOSTELRY.

Large, Handsome, Well Built, Commodious and Well Ventilated Rooms. Broad Halls and Verandas. Elegantly Furnished. Equipped with Every Appliance that could add to the Comfort of Its Guests.

The Fairmount is under the management of Mr. George L. Jacoby, who was manager of the Hotel Roanoke in its early and palmy days. It will be kept up to the highest showing of hotel excellence.

The Fairmount is on a hill in a beautiful park a short distance from the town center. In a few hundred yards is a large lake provided with bathhouses and boats.

It is preeminently the place for visitors from the South in summer, and from the North in winter. Bristol, like most of the mountain section of East Tennessee and Virginia, has a delightful climate the year round.

An orchestra is employed at the hotel permanently. For the convenience of commercial travelers, the hotel maintains a number of large sample rooms in the business center of the town. Street cars run to the hotel.

A comfortable, easy and elegant omnibus meets every train. Since it was opened, the Fairmount has done a constantly increasing business. Commercial men gather here from surrounding towns to spend Sunday. It is THE hotel of this rapidly growing town.

SOUTHERN PEOPLE, TOURISTS, TRAVELERS & BUSINESS MEN

SHOULD STOP AT

THE Beautiful and Elegant  
\* "NIACARA" HOTEL,  
Front and Porter Ave. BUFFALO, N. Y.

The Most Elegant Hotel in America. Situated commanding a beautiful view of Lake Erie and Niagara River. Spacious conservatory filled with rare exotics. Special rates made for parties remaining one week or longer. Hotel particularly well located for business men and their families. LATE DINNERS. MUSIC.

RATES—\$4.00 a day and upwards (American Plan.)

Telegraph for accommodations in advance at our expense.

HENRY F. ROESSER, Manager.

**RYDER & DEARTH**  
FINE COMMERCIAL PRINTERS.  
PHOTO-ENGRAVING IN ALL ITS BRANCHES.  
Specialists in fine Machinery and general Wood Engraving. Portraits, Buildings, etc. Artistic designs in Letter and Bill Heads, Business Cards, Display Lettering for advertising purposes, etc. Best work. Lowest prices. Electrotyping at lowest rates. 146 WESTMINSTER STREET PROVIDENCE, R. I.

## STEEL ENGRAVING.

PORTRAITS for Genealogical, County and Town Histories A SPECIALTY. Also VIEWS of MANUFACTORIES and DWELLINGS. Twenty-five years' experience. Eminent references given.

J. A. J. WILCOX,  
22 Pemberton Square, Boston, Mass.

ESTABLISHED 1876.

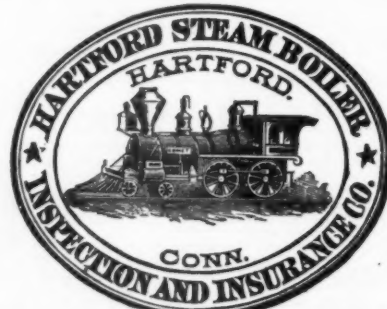
**BUDDEN SON**  
10 & 12 W. WALL ST.  
PRINTERS & BINDERS.  
ATLANTA, GA.

Bonds. CERTIFICATES OF STOCK. Office Stationery. LABELS. SHOW CARDS & ADVERTISING NOVELTIES.

PRINTING PRESSES  
TYPE AND PRINTERS' MATERIALS OF EVERY DESCRIPTION.  
THE JOHN RYAN CO.  
BALTIMORE, MD.

**AULT & WILBORG**  
PRINTING INKS.  
CINCINNATI.  
A&W INK USED ON THIS PUBLICATION.

BRANCH OFFICE,  
152 and 154 Monroe Street, Chicago.



Issues Policies of Insurance after Careful Inspection of the Boilers, covering Loss or damage to property, and Loss of Life and Personal Injury ARISING FROM STEAM BOILER EXPLOSIONS.

Full information concerning the plan of the Company's operations can be obtained at the COMPANY'S OFFICE, Hartford, Conn., or at any Agency.

J. M. ALLEN, President.  
J. B. PIERCE, Secretary.

W. B. FRANKLIN, Vice-Prest.  
F. B. ALLEN, 2d Vice-Prest.

### BOARD OF DIRECTORS:

J. M. ALLEN, President.  
FRANK W. CHENEY, Treas. Cheney Bros. Silk Mfg. Co.  
CHARLES M. BEACH, of Beach & Co.  
DANIEL PHILLIPS, of Adams Express Co.  
RICHARD W. H. JARVIS, Pres. Colt's Fire Arms Mfg. Co.  
THOMAS O. ENDERS, Pres. of the United States Bank.  
LEVERETT BRAINARD, of The Case, Lockwood & Brainard Co.  
GEN. WM. B. FRANKLIN, late Vice-Prest. Colt's Patent Fire Arms Mfg. Co.  
NEWTON CASE, of The Case, Lockwood & Brainard Co.

NELSON HOLLISTER, of State Bank, Hartford.  
HON. HENRY C. ROBINSON, Attorney-at-Law, Hartford.  
HON. FRANCIS B. COOLEY, of the Nat. Exchange Bank, Hartford, Conn.  
A. W. JILLSON, late Vice-Prest. Phoenix Fire Insurance Co., Hartford, Conn.  
EDMUND A. STEADMAN, Treas. of the Fidelity Co., Hartford, Conn.  
CLAPP SPOONER, Bridgeport, Conn.  
GEORGE BURNHAM, Baldwin Locomotive Works, Phila.  
HON. NATHANIEL SHIPMAN, Judge U. S. Circuit Court.

Maryland Department—LAWFORD & MAKIN, Gen. Agents 23 S. Holliday St., Baltimore.



**MENGEL'S**  
PRINTING-  
PRESSES,  
PRINTERS'  
MATERIALS.

PAPER-  
CUTTERS,  
PRINTING  
INKS, &C.

LARGEST TYPE AND ELECTROTYPE FOUNDRY AND PRINT-  
ERS' SUPPLY HOUSE SOUTH OF PHILADELPHIA.  
Our Type is now used by The Baltimore Sun, Washington Post,  
Critic, Herald, Public Opinion, and nearly all the leading Newspaper  
and Book Offices in this vicinity. Send for estimates.

**JOHN G. MENGEL & CO.**  
No. 111 E. GERMAN ST., BALTIMORE, MD.

**ATLANTIC TRANSPORT LINE,**  
BETWEEN BALTIMORE AND LONDON  
Calling at Swansea and Philadelphia on the outward  
passage.

S.S. Minnesota, 5,000 tons. S.S. Missouri, 4,900 tons.  
S.S. Maryland, 4,900 tons. S.S. Michigan, (Bldg.)  
S.S. Montana, 4,900 tons. S.S. Mississippi, (Bldg.)  
S.S. Maine, 4,150 tons.

**BALTIMORE STORAGE & LIGHTERAGE CO.**  
151 La Salle Street, and 115 Fenchurch Street,  
Chicago, Ill.  
409 Second Street, Baltimore, Md.

## THE BAY LINE

Fortress Monroe, Norfolk and the South.  
The Bay Line comprises the New and Elegant Steamers  
"VIRGINIA," "CAROLINA" and "FLORIDA."  
All the Comforts and Luxuries of a First-Class Hotel are  
afforded the traveler. Spacious and elegant saloons and  
staterooms, furnished with an especial view to com-  
fort. Unsurpassed Cuisine, which is made a specialty  
with this line. Elegant service and courteous attention  
steamer leave Baltimore daily (except Sunday) at 9 P. M.  
An Old Point Comfort is located the SPLENDID  
HYGIEA HOTEL, a Delightful Resort at all Seasons of  
the Year. For Tickets and information apply at  
Company's office,  
157 W. BALTIMORE STREET, BALTIMORE.  
Or on Board of Steamers.  
D. J. HILL, Superintendent.  
E. BROWN, General Ticket Agent.

## FAST TRAIN LINE.

### Cleveland and Canton R. R. Co.

Newly Rebuilt to Standard Gauge.

New & Elegant Pullman Palace Cars.  
Heated by steam from the locomotive.  
No Stoves! No Danger from Fire!  
Three fast trains each way daily be-  
tween Cleveland and Canton.  
Two fast trains each way daily be-  
tween Cleveland and Zanesville.  
No change of cars between Cleveland  
and Zanesville.

J. W. WARDWELL, Gen. Supt.  
ALBERT ROKUSEK, Gen. Pas. Agt.

### New Trans-Continental Route

VIA CHICAGO, MILWAUKEE & ST. PAUL  
AND NORTHERN PACIFIC RAILROADS.  
Through Pullman Sleeping Car leaves  
Chicago daily at 5:30 P. M.  
For St. Paul and Minneapolis.  
" Fargo, North Dakota.  
" Helena and Butte, Montana.  
" The Yellowstone Park.  
" Spokane Falls and Tacoma.  
" Portland, Oregon.  
Best Route to Seattle and all North  
Pacific Coast Points.  
The Scenic line to California, via Port-  
land and the Shasta Route.  
Tickets on sale everywhere.  
For information apply to any Agent, or  
address A. V. H. CARPENTER, General  
Passenger Agent, Chicago, Ill.

### Pittsburgh & Lake Erie R. R.

### CLEVELAND SHORT LINE.

20 Miles Shorter than any Other Line.  
Makes quicker time and has double the  
train service of any line between  
Pittsburgh and Cleveland.

IT IS THE BEST ROUTE TO  
Buffalo, Niagara Falls, Toronto,  
Rochester, Syracuse, Utica,  
And all points in Central and Northern  
New York and New England.

Bradford and All Points Reached  
by the Erie Railway.  
A. E. CLARK, General Passenger Agent.

## VALLEY RAILWAY

Short and Only Direct Route Between  
CLEVELAND, AKRON, CANTON,  
MARIETTA and WHEELING.

Only line running Pullman Buffet Sleeping Cars  
between Cleveland, Washington and Baltimore  
without change. Ask for tickets via Valley and  
B. & O. Route.  
J. T. JOHNSON, J. B. CAVEN,  
General Supt. Gen. Pass. Agent.

## The D & C TO MACKINAC

SUMMER TOURS.  
PALACE STEAMERS. LOW RATES.  
Four Trips per Week Between  
DETROIT, MACKINAC ISLAND/  
Potosky, The Soo, Marquette, and  
Lake Huron Ports.  
Every Evening Between  
DETROIT AND CLEVELAND  
Sunday Trips during June, July, August and  
September Only.

OUR ILLUSTRATED PAMPHLETS,  
Rates and Excursion Tickets will be furnished  
by your Ticket Agent, or address  
E. B. WHITCOMB, G. P. A., DETROIT, MICH.,  
THE DETROIT & CLEVELAND STEAM NAV. CO.

## Old Kentucky Route.

Newport News and Mississippi  
Valley Co., "E. D."  
The THROUGH SLEEPER ROUTE  
— TO —  
Lexington, Ky. Louisville, Ky.  
Chattanooga, Tenn. St. Louis, Mo.  
Memphis, Tenn.  
And All Points West and Southwest.

Only one night out to Lexington and Louisville.  
A sumptuous Pullman Sleeping Car leaves Wash-  
ington, D. C., at 9:40 P. M. daily, attached to  
the C. & O. F. V. train, and runs through to  
Louisville.  
Be sure your tickets read via the N. N. & M. V.  
Co. and Lexington. Tickets via this route on  
sale at all C. & O. and P. R. R. stations.  
S. A. BROMBERG, T. P. A. J. L. MURPHY, G. P. A.  
Lexington, Ky. Lexington, Ky.  
J. D. VARRINGTON, ad V. P. Lexington, Ky.

## The Shenandoah Valley Illustrated.

The Shenandoah Valley Railroad Com-  
pany issue a finely illustrated circular de-  
scriptive of the Valley of Virginia, famed  
from the days of Spotswood and the Horse-  
shoe Knights, and made historic by the  
deeds of Jackson, Sheridan and other great  
military chieftains of the late war. The  
book is a chronicle of a leisurely journey  
through the uplands of Virginia, with run-  
ning descriptions of the caverns of Luray,  
the Natural Bridge and the Grottoes of the  
Shenandoah. Hardly a rood of the famed  
valley is lacking in historic associations,  
and the map accompanying the publication  
will guide the visitor to the more famous  
spots. Certainly, no more interesting re-  
gion worthy of the attention of the tourist  
is to be found than the Valley of Virginia.  
This company also issues a pamphlet  
known as the "Shenandoah Valley," and  
treats entirely upon the great natural re-  
sources awaiting development in the Shen-  
andoah Valley of Virginia.  
Copies mailed free upon application to  
O. HOWARD ROYER,  
Gen'l F. & P. Agt., Roanoke, Va.

## THE BRADSTREET Mercantile Agency

WAS ESTABLISHED IN 1849.  
Is the oldest and financially the strongest organiza-  
tion of its kind, working in one interest and under  
one management, with more capital invested in the  
business, and expending more money every year for  
the collection and dissemination of its information  
than any similar institution in the world. Its reports  
are considered in the light of a guide by both invest-  
ors and those contemplating the granting of credit.  
In addition to a large corps of skilled employees,  
more than one hundred thousand correspondents  
contribute the result of their investigation and  
opinions. Subscriptions are annual, and may com-  
mence at any time the subscriber elects. Details as  
to prices and terms will be furnished upon applica-  
tion.  
CHARLES F. CLARK, President.  
Baltimore Office—American Building.  
M. KERSHAW, Supt.



## PREMIER FLOUR OF AMERICA.

Patapsco Flouring Mills.  
ESTABLISHED 1774.

PERFECTION IN FLOUR.

**PATAPSCO SUPERLATIVE PATENT,**  
THE PREMIER FLOUR OF AMERICA,  
IS UNSURPASSED FOR BREAD, BISCUIT OR PASTRY.  
ASK YOUR GROCER FOR  
PATAPSCO SUPERLATIVE PATENT, PATAPSCO FAMILY PATENT  
ROLANDO CHOICE PATENT, ORANGE GROVE EXTRA.

**C. A. GAMBRILL MFG. CO.**

Office, 214 Commerce Street, Baltimore, Md.

## RICHMOND & DANVILLE R. R. CO. (PIEDMONT AIR-LINE.)

THE SHORT AND DIRECT LINE FROM  
Washington, D. C., and Richmond, Va.,

To Atlanta, Augusta, Columbia, Asheville, Raleigh, Greensboro, Salisbury,  
Goldensboro, Birmingham, Montgomery, Vicksburg, Shreveport, Mobile,  
New Orleans, Texas, Mexico and California, and the  
South and Southwest.

DOUBLE DAILY, SOLID TRAINS between Washington and Atlanta.  
Pullman's Palace Buffet and Drawing-Room Sleeping Cars without change  
to Atlanta, New Orleans, Augusta, etc.  
For maps, time-tables, rates of passage, freight, etc., apply to nearest Station Agent of the Pied-  
mont Air Line, or to any Railroad Agent of principal lines North or South.  
PEYTON RANDOLPH, General Manager. SOL. HAAS, Traffic Manager.  
JAS. L. TAYLOR, Gen. Pass. Agent.



## The East Tennessee, Virginia & Georgia R.V.

### IS THE SHORT LINE

East and West, North and South.

Daily Sleeping Car Service Between  
WASHINGTON and MEMPHIS,  
WASHINGTON and NEW ORLEANS.

AND DOUBLE DAILY SERVICE BETWEEN  
CINCINNATI and JACKSONVILLE  
The Shortest Route. The Cheapest Route.

The Quickest Route. The Best Route.  
B. W. WRENN, General Passenger and Ticket  
Agent, Knoxville, Tenn.  
C. A. BENSCHOTER, A. G. P. A., Knoxville, Tenn.  
C. A. DESAUSSEURE, A. G. P. A., Memphis, Tenn.  
CHAS. N. KNIGHT, A. G. P. A., Atlanta, Ga.  
L. H. BELL, A. G. P. A., Selma, Ala.

## Western Maryland R. R.

Short Freight Line to Westminster, Frederick, Taneytown and Hagerstown, Md.; Waynesboro, Cham-  
berburg, Shippensburg, Hanover, Gettysburg and Carlisle, Pa.; also points on the Frederick Division P.  
R. R., Gettysburg & Harrisburg R. R., Harrisburg & Potomac R. R., Shenandoah Valley R. R., Norfolk  
& Western R. R. and connections, also route of

### Great Southern Despatch.

All rail Fast Freight Line for Southern and Southwestern points, via Bristol, Tenn. Freight received  
in any quantity at Hillen Station, and in car loads at Fulton, Canton and Jackson's wharf. Shippers desir-  
ing information will be called on. Send postal card with address to

**B. H. CRISWOLD,**  
G. F. A., Hillen Station, Baltimore, Md.

## The Finest on Earth.

The Cincinnati, Hamilton & Dayton R. R.  
is the only line running Pullman's Per-  
fected Safety Vestibuled Trains, with Chair,  
Parlor, Sleeping and Dining Car service  
between Cincinnati, Indianapolis and  
Chicago, and is the Only Line running  
Through Reclining Chair Cars between Cin-  
cinnati, Keokuk and Springfield, Ill., and  
Combination Chair and Sleeping Car Cin-  
cinnati to Peoria, Ill.

And the Only DIRECT LINE  
between Cincinnati, Dayton, Lima, Toledo,  
Detroit, the Lake Regions and Canada.

The road is one of the oldest in the State  
of Ohio and the only line entering Cin-  
cinnati over twenty-five miles of double track,  
and from its past record can more than  
assure its patrons speed, comfort and safety.

Tickets on sale everywhere, and see that  
they read C. H. & D., either in or out of  
Cincinnati, Indianapolis, or Toledo.

**E. O. McCORMICK,**  
General Passenger and Ticket Agent.

## — TAKE THE — Cleveland, Lorain & Wheeling R. R.

The Most Direct Route Between

CLEVELAND, OHIO,

and WHEELING, W. VA.

BEAUTIFUL SCENERY AND QUICK TIME.

No change of cars. For time cards, etc., address  
OSCAR TOWNSEND, Gen'l Manager.

## Wheeling & Lake Erie RAILWAY.

### The New Through Line

Between Toledo and Bowerston, Pittsburgh, Ma-  
rietta. Through Coaches between Toledo  
and Marietta. Through Sleepers between Pitts-  
burgh and Chicago, and Day Coaches between  
Toledo and Pittsburgh, via Akron, Cuyahoga  
Falls, Kent, Ravenna, Leavittsburg, Warren,  
Niles, Girard, Youngstown, New Castle and  
Allegheny.

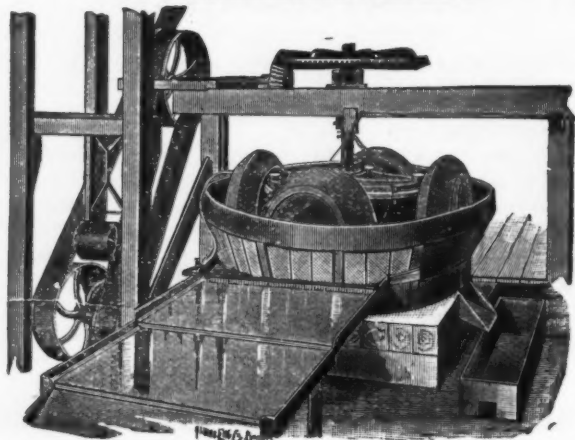
THE ONLY LINE RUNNING THROUGH  
"BEAUTIFUL ZOAR"

**A. G. BLAIR,** **JAS. M. HALL,**  
Traffic Manager. Gen. Pass. Agent.

## \* WISWELL \*

# Ore Pulverizer and Amalgamator

### COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrel & Marsden, manufacturers of Stone Breakers and Ore Crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

*Wiswell Electric Mining Machinery Co.:*

GENTLEMEN—After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold-saving machine I have ever seen. Please accept congratulations for your success. S. L. MARSDEN.

WE FURNISH A COMPLETE MILL FOR \$2,500, DELIVERED ON BOARD CARS.

FOR FURTHER INFORMATION ADDRESS

**Wiswell Electric Mining Machinery Company,**

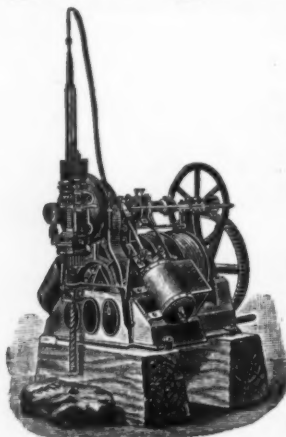
4 POSTOFFICE SQUARE,

A. A. REEVE, Treasurer.

BOSTON, MASS.

**BUY THE BEST.**

## Bullock's Diamond Prospecting Core Drills,



Diamond Prospecting Drill.

For Surface or Underground Prospecting.  
The Only Drills that will give an Accurate Record of every Strata Penetrated.

ALL DRILLS SOLD WITHOUT RESTRICTIONS.

**Lane's Band Friction Hoisting Machinery**

Drums from 2 Feet to 25 Feet in Diameter.

**Improved Corliss Engines,**

Slide Valve and Straight Line Engines,

Eclipse Rock Drills, Air Compressors,

Channeling and Quarrying Machines.

**M. C. BULLOCK MFG. CO.**

No. 138 Jackson Street,

Write for what you want. CHICAGO.

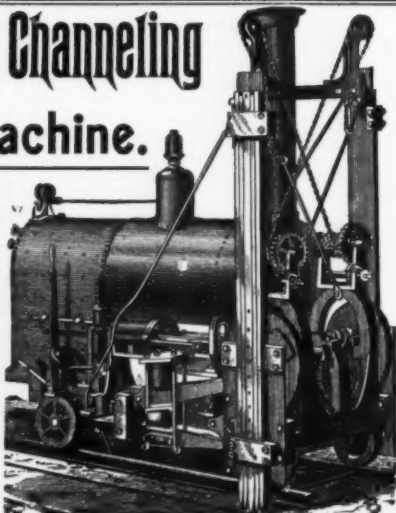
Cable Address: BULLOCK, CHICAGO.

## THE Wardwell Stone Channeling AND Quarrying Machine.

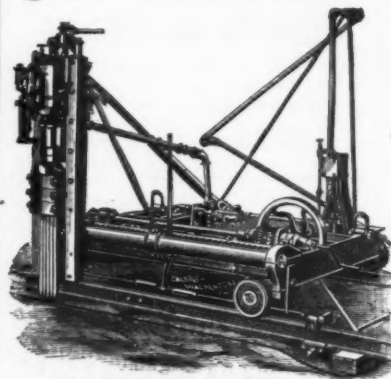
WILL pay for itself in a short time in reduced cost of getting out Stone. Has no equal for efficiency and economy of operation. Pronounced by those who have used it the best machine for the purpose in the world. Send for illustrated catalogue, with full descriptions and letters from parties now using the machines.

**Steam Stone Cutter Co.**

RUTLAND, VERMONT.



## SULLIVAN DIAMOND POINTED AND STEEL QUARRYING MACHINERY.



SULLIVAN STEEL GANG CHANNELER.

repairs, and with the greatest ease and convenience of operation.

Diamond Channelers,  
Steel Channelers,  
Diamond Gadders,  
Diamond Prospecting Core Drills.

WE HAVE RECENTLY PUT ON THE MARKET A  
**DIRECT ACTING  
STEEL GANG CHANNELER**

Adapted in design and construction to do rapid work, with high economy of steam and few repairs.

## Diamond Prospecting Co.

15 & 17 N. CLINTON ST., CHICAGO, ILL.

GENERAL AGENTS FOR

Sullivan Diamond Pointed & Steel Quarrying Machines  
and Diamond Prospecting Core Drills.

**QUARRY HOISTS. STEAM PUMPS. BOILERS.**

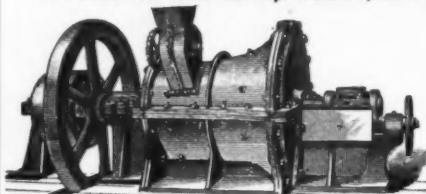
Contractors for Prospecting with the Core Drill.

CORE DRILL—HAND-POWER.



## The Greatest Pulverizer in the World.

Pulverizes from 10 to 160 mesh fineness, and has a capacity of 1 to 3 tons per hour.



For pulverizing Phosphates, Plumbago, Cement, Foundry Facings, Iron for Paints, Gold and Silver Ores, Flint Rock for Glass, Coke for Carbons, Palats, Asphalt Materials, Feldspar, Red Ochre, Sandstone, Limestone and Calcined Lime. Correspondence solicited. Send for samples of different products.

**F. H. MOORE,**

Manufacturer,

48 City Hall Bldg., Cleveland, O.

SEND FOR  
CIRCULAR.



## Cornish Rolls Pulverizer.

SIMPLE, DURABLE, COMPACT, DUSTLESS.

Finished Product Direct from the Machine.

The Best Ore Granulator for Leaching and Concentration in the World.

MANUFACTURE ALSO THE

**GATES ROCK and ORE BREAKER.**

Capacity the Greatest.

Requires the Least Power.

UNEQUALLED FOR BALLAST, ROAD, METAL, ORE CRUSHING.

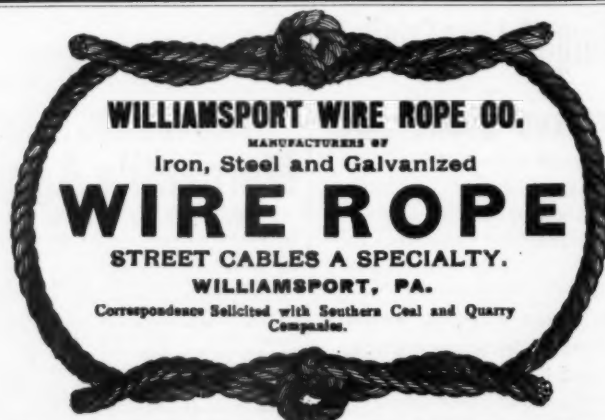
Fine Crushing Plants a Specialty.

Concentrators and Other Mining Machinery.

**GATES IRON WORKS**

PATENTED  
June 27, 1882.  
Dec. 19, 1882.  
Oct. 9, 1882.  
June 9, 1885.  
215 Franklin Street, Boston, Mass.

12 Cortland St., New York, U.S.A. 72a Queen Victoria St., E.C. London, Eng.  
50 H. South Clinton St., Chicago, U.S.A.



**WILLIAMSPORT WIRE ROPE CO.**

MANUFACTURERS OF

Iron, Steel and Galvanized

**WIRE ROPE**

STREET CABLES A SPECIALTY.

WILLIAMSPORT, PA.

Correspondence Solicited with Southern Coal and Quarry Companies.

## Lincoln Iron Works. Machinery

RUTLAND, VT. For working Marble, Stone and Wood Shaffing, Pulleys and Gearing. Send for Catalogue.



NOW READY TO FILL ORDERS.

# THE RAYMOND BROS. IMPACT PULVERIZER CO.

303-311 SOUTH CANAL STREET,  
CHICAGO, ILL.

Builders of Complete Plants for the Reduction of all kinds of Soft, Hard or Fibrous materials to any Degree of Fineness, and Manufacturers of the

## Celebrated Automatic and Impact Pulverizers.

### DAVIDS' PATENT DISINTEGRATING MILL

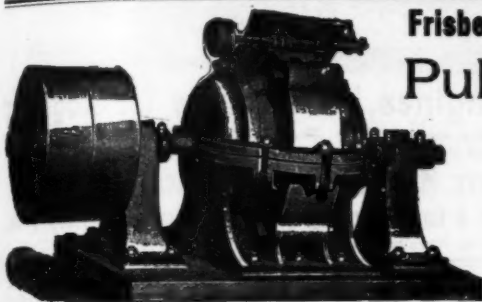
For Bones, Phosphates, Tankage, Ores, Clay, Fish Scrap, Salt Cake, &c. Fertilizer Machinery, Mixers' Rolls, Breakers, &c., &c. Marine Railways, Clay Temperers. Send for Catalogue.

JAMES MURRAY & SON, 102 to 108 York Street, Baltimore, Md.

McLANAHAN & STONE, Engineers and Manufacturers, GAYSPORT FOUNDRY, HOLLIDAYSBURG, PA.

Blast Furnace, Rolling Mill and Heavy Castings and Machinery for all purposes.

**ORE JIGS, IMPROVED ORE WASHERS,**  
with Revolving Screens and Picking Tables.  
Elevators and Conveyors, Etc.  
Complete Plants for washing HEMATITE ORES at Least Cost.



### Frisbee Lucop Mills for Pulverizing.

At half the cost of that by Buhr Stones. Used by leading Cement and Fertilizer Manufacturers. Finished Product. No Tailings. Capacity up to 3 tons per hour. Record of constant use for 6 years.

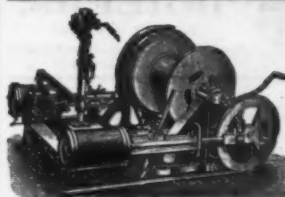
FRISBEE LUCOP MILL CO.  
145 Broadway, New York.

These newly-invented Pulverizing Machines break all previous records for Large Capacity with Small Power and Little Wear and Tear. With this machine the average cost of grinding the very hardest iron ore for paint is but 75 cents per ton, which includes the power, handling and everything. We solicit correspondence with paint Mills, Phosphate Works, Brick-yards and everyone requiring the best Pulverizer and Disintegrator. Machines sent on trial to responsible parties, and prices and circulars forwarded on application.

## ALLENTOWN FOUNDRY & MACHINE CO

ALLENTOWN, PA.

ALL KINDS OF MACHINERY FOR MINING AND WASHING HEMATITE ORES. ORE JIGS, PUMPS, ENGINES AND BOILERS FOR MANUFACTURING AND MINING PURPOSES. PAINT, CEMENT AND BARK MILLS. POWDER MILL MACHINERY. LIGHT AND HEAVY MILL GEARING. PULLEYS, HANGERS AND SHAFTHING. EUREKA TURBINES, BLAST FURNACE WORK, SUCH AS BELLS, HOPPERS, HOT BLAST STOVES. TUYERE JACKETS, ETC. LIGHT AND HEAVY CASTINGS. ROUGH AND FINISHED TO ORDER. SEND FOR ESTIMATES AND PRICES.

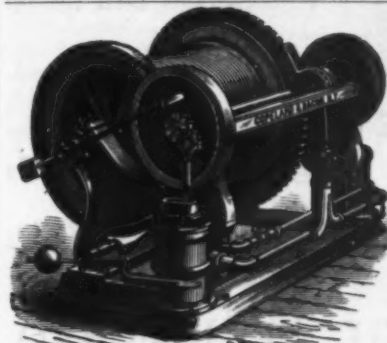


Contractors' and Steam Shovel Cars, Derrick Fixtures, Winches, Hoisting Engines, Hoisting Drums, Stationary and Portable Engines, Rollers, Light Locomotives, etc.



Manufactured by RYAN-McDONALD MFG. CO.  
Shops and Warehouses, WATERLOO, N. Y.  
Send for Illustrated Catalogue and Prices.

WATERLOO, N. Y.  
BALTIMORE, MD., No. 4 SOUTH ST.



### BACON WINDING ENGINES, FURNACE HOISTS, MINE HOISTS.

(With or Without Boilers.)

"MINING PLANTS," Concentrating Works and Dredging Machinery Furnished Complete.

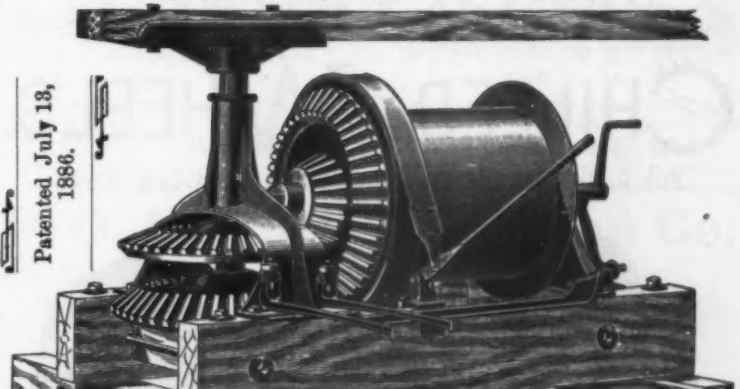
### COPELAND & BACON

85 Liberty Street, New York.  
585 Arch Street, PHILADELPHIA.

REFERENCES: Croton Magnetic Iron Mines, Brewster's, N. Y. Crown Point Iron Co., Crown Point, N. Y. Belvidere Iron Co., 53 Broadway, New York. Sea Island Chemical Co., Beaufort, S. C.

## THE CONTRACTORS' PLANT MANFG. CO.

129 ERIE STREET, BUFFALO, N. Y. U. S. A.



AN IMPROVED HORSE POWER HOISTING MACHINE, with a combination of fast and slow speed. With fast speed a horse will lift 1,000 to 1,500 lbs. on a single line at a speed of 60 feet per minute, and with a single block 3,000 lbs. 40 feet per minute. With the slow speed a weight of 1 1/4 tons with a single line, and with a single block 3 tons; with two single blocks 5 tons; with double and single blocks 7 tons. The speed single line 30 feet per minute, with single block 25 feet per minute. In this combination of gears the user has the advantage of two machines embraced in one, with a saving of 25 per cent. in cost and 60 per cent. in weight.

SIMPLE, DOES NOT GET OUT OF ORDER.

WRITE FOR ILLUSTRATED CATALOGUE OF

### HORSE POWER HOISTING MACHINERY

For Bridge Builders, Contractors, Quarrymen, Mineral and Coal Miners, Masons and Builders.

DEERICKS AND CONTRACTORS' SUPPLIES. Mention this paper when you write.

## W. J. CLARK & CO. Salem, Ohio,

MANUFACTURERS OF

### Elevating and Conveying Specialties

SOLE MANUFACTURERS OF THE

### "Salem" Elevator Bucket

For Mill and Elevator Work, Ear Corn, Corn and Cobs, Ores, Coal, Broken Stone, etc.

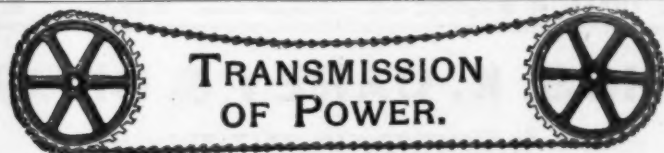
Send 9 cents (stamps) for postage on Sample Salem Bucket and Illustrated Catalogue.

### The New Griffin Mill

does double work with same horse-power.

Send for Descriptive Pamphlet to the

Bradley Fertilizer Co., Boston, Agents.



### TRANSMISSION OF POWER.

Machinery for Handling any Material in Bulk or in Packages.

## The Link-Belt Engineering Company,

NEW YORK 49 Dey Street. Nicetown, PHILADELPHIA, PA.

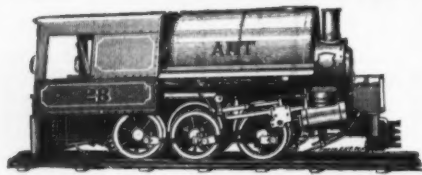
Successors to BURR & DODGE, PHILADELPHIA,

AND

EASTERN BRANCH LINK-BELT MACHINERY CO.

New York.

EWART DETACHABLE LINK-BELTING,  
DODGE CABLE CHAIN  
ELEVATORS, CONVEYORS, LINK DRIVING BELTS.

**H. K. PORTER & CO., PITTSBURGH, PA., U. S. A.****Light Locomotives and Noiseless Motors**

All gauges of track for Passenger and Freight Service, Logging Railroads, Mines, Blast Furnaces, Steel Works, Coke Ovens, Contractors' Work and Plantations.

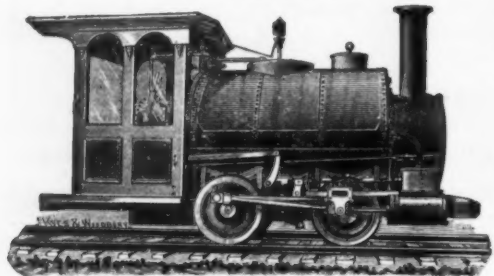
All sizes and patterns, adapted to steep grades and sharp curves. Noiseless and smokeless. Cheaper and more reliable and efficient, and less objectionable than electric or cable system.

Photographs and illustrated catalogue on application. In writing mention MANUFACTURERS' RECORD.

Memo.—All work STEEL FITTED and built to duplicate system. Extra parts kept in stock. We keep on hand, ready for immediate shipment, LOCOMOTIVES AND MOTORS OF SEVERAL SIZES, WIDE OR NARROW GAUGE.

**Richmond Locomotive & Machine Works, Richmond, Va.**

ESTABLISHED IN 1865.

**LOCOMOTIVES**

for every variety of service to Standard Designs or to meet views of purchasers.

**MOTORS**

for Street Railways, Tram Roads and Mines.

Stationary Engines for heavy duty.

**BOILERS,**

Standard or Special. Send for Catalogues, Specifications and Estimates.

**DYOTT & CO. 52 WALL STREET NEW YORK.****Railroad Equipment AND SUPPLIES.**

Locomotives, Cars, Rails,

FASTENINGS, SPIKES, ETC.

Frogs, Crossings, Switches, &c.

Securities negotiated. Contracts taken.

ESTABLISHED 1847.

PHILADELPHIA.

**A. WHITNEY & SONS, Chilled Wheels for Engines and Cars,**

Cast in the Whitney Contracting Chill and Warranted Smooth and Round Without Grinding.

STEEL-TIRED WHEELS WITH CAST-IRON CENTRES, SPOKE OR PLATE PATTERN.

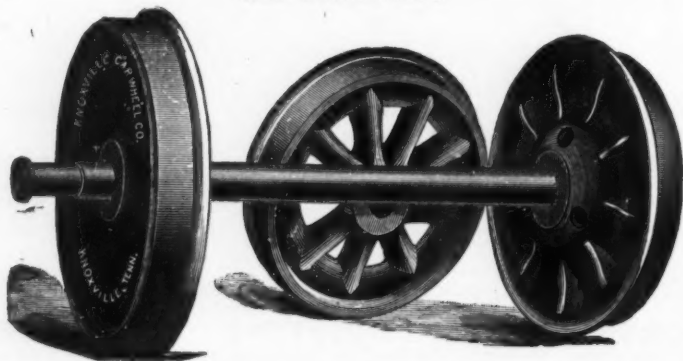
**Knoxville Car Wheel Co**

KNOXVILLE, TENN.

Manufacturers of all kinds of

**CHILLED WHEELS.**

For Railroads, Street Railroads, Ore and Coal Mines and Lumbermen.



Steam Hammers,  
Foundry Cupolas,  
Derricks, Crabs,  
Horse-Powers,  
Shieves, Drill Heads,  
Gearing, Pulleys.  
Locomotives and Engines  
Repaired and Indicated.

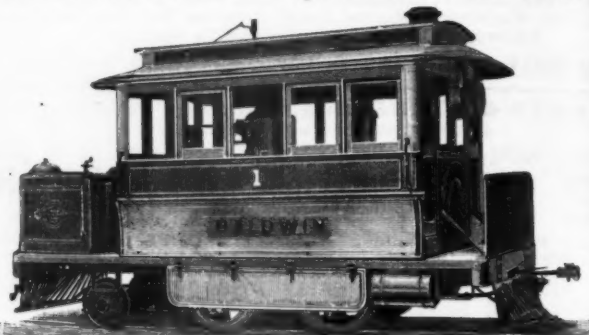
CORRESPONDENCE SOLICITED.

Guild's Automatic  
Boiler Cleaner,  
Car and Locomotive Castings.  
Soft Iron Castings of all kinds.  
Heavy Castings a specialty.  
Wheels mounted on Axles if  
desired, with Oil Boxes  
and Bolts.

MENTION THIS PAPER.

**BALDWIN LOCOMOTIVE WORKS**

ESTABLISHED 1831.



ANNUAL CAPACITY 1881.

**Locomotive Engines, Locomotives for Logging**

Adapted to every variety of service, and built accurately to standard gauges and templates.

RAILROADS AND SUGAR ESTATES.

Steam Tramway Motors, Mine Locomotives, Furnace Locomotives.  
Burnham, Parry, Williams & Co., 800 N. BROAD STREET, Philadelphia, Pa.

In writing, please refer to Manufacturers' Record.

**STEEL RAILS****PENNSYLVANIA**

Standard Sections

Light Sections

Street Rails

Fish Plates,  
Frogs, Switches

STEPHEN W. BALDWIN  
SALES AGENT

**STEEL COMPANY**

50 to 80 lbs. per yard

16 " 45 " " "

30 " 88 " " "

Bolts & Nuts,  
and Crossings.

NO. 2 WALL STREET  
NEW YORK N.Y.

16 lbs. Full Size.

**MINER & PECK M'F'G CO.**  
SUCCESSORS TO BEECHER & PECK  
**THE PECK PATENT DROP PRESS**  
DROP FORGINGS BLAST FORGES  
NEW HAVEN, CONN.

**MACHINE SHOP AND BLACKSMITH EQUIPMENTS**

\*A SPECIALTY.\*

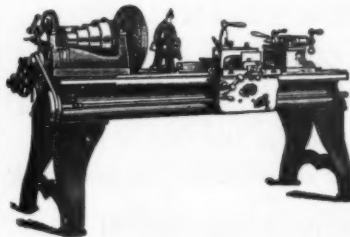
Engine Lathes, Chucks, Drill Presses, Shaping Machines, Power Hammers, Bolt and Nut Machinery, Portable Forges, &c. Pressure Blowers and Emery Grinding Machinery. Send for Catalogue of Machine Tools, stating exactly what is required, so that prices may be quoted. Delivered your station if so desired.

W. E. DREW, Agent.

S. C. FORSAITH MACHINE CO. Mechanism and General Machinery Dealers, Manchester, N. H.

**THOS. K. CAREY & BROS.**

No. 26 LIGHT STREET, BALTIMORE, MD.



IRON AND

WOOD-WORKING

**Machinery.**

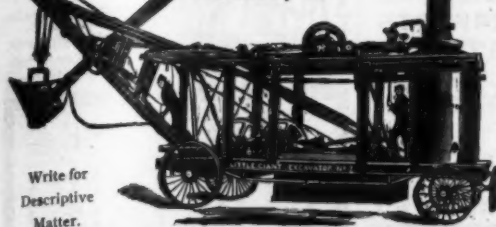
Engines, Boilers, Duplex Pumps, Lathes, Planers, Drill  
Presses, Pulleys, Shafting, Hangers, Belting, &c.

Railroad and Mill Supplies. Machinists' Tools, Etc.



## The Vulcan Iron Works Co.

TOLEDO, O.

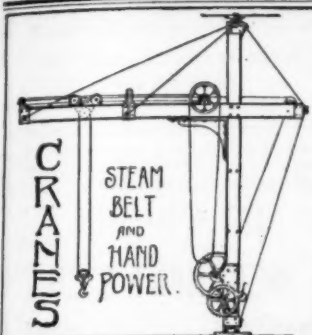


Write for  
Descriptive  
Matter.

MANUFACTURERS OF  
Dredges and Excavators,  
MARINE, HOISTING and  
STATIONARY ENGINES,  
Foundry, Rolling Mill and  
Dock Cranes.

A general line of Plain and Or-  
namental Boiler Fronts and  
Fittings and General  
Founders.

The "Little Giant" Excavator  
WEIGHT 20 TONS.  
Capacity 1,500 cub. yds. per day  
The "GIANT" RAILROAD EXCAVATOR,  
WEIGHT 40 TONS.  
Capacity 2,000 cub. yds. per day



## Detroit Foundry Equipment Co.

DETROIT, MICH.

MANUFACTURERS OF

## WHITING'S IMPROVED Car Wheel Foundry Plant.

The Whiting Cupola Foundry Ladles and  
Reservoirs, Elevators, Clay Grinders,  
Wheel Breakers, Tumblers, Snap  
Flasks, Wheelbarrows, &c.  
Correspondence Solicited.

## STEEL CASTINGS

From 1-4 to 15,000 lbs. Weight.

True to pattern, sound, solid, free from blow-holes, and of un-  
equal strength. Stronger and more durable than iron forgings in  
any position or for any service whatever. 60,000 CRANK SHAFTS  
and 50,000 GEAR WHEELS of this steel now running prove this.  
CRANK SHAFTS and GEARING specialities. STEEL  
CASTINGS of every description. Send for circulars and prices to

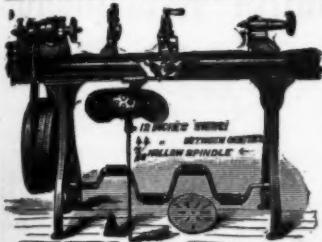
CHESTER STEEL CASTINGS CO.

Offces, 407 Liberty St., Philadelphia.

Works, Chester, Pa.

## Barnes' Patent Foot Power Machinery.

Complete outfit for Actual Workshop Business. Lathes for Wood or  
Metal. Circular Saws, Scroll Saws, Formers, Mortisers,  
Tenoners, Etc., Etc.



Our Patent Velocipede Foot-Power is without question the best yet  
applied to Lathes. Read a few expressions from those using them:  
"I do not see how your lathes can be produced at so low cost." "The  
velocipede foot-power is simply elegant." "Can turn a whole day,  
and feel as little tired as though only walking around." "In regard  
to the velocipede foot-power, I consider the lathe without an equal."  
"I sat at the lathe for 11 hours, cutting off and threading 15 steam  
pipes. Those who saw it declared it equal to 15 hour job in machine  
shop." "Using the velocipede foot-power, the operator can hold a steady  
hand for doing the work." "For doing actual business, the lightest or  
the heaviest, give me the velocipede foot-power." "The 4 1/2 Lathes is  
equal to any costing twice the money." "What astonishes me is, how  
you can make machines to pay you for so small sum of money." "The  
No. 6 Lathes is the most perfect tool I ever saw for the money." "I can  
do double the amount of work on the velocipede, that I can on any  
other style of foot-power lathe." "There is a tax on strength, the  
body is at rest, steady, the hands and attention free for the job."  
"The velocipede.—It is the best foot-power of any for lathes."

If desired, these machines will be sold ON TRIAL. The purchaser can have ample time to test  
them in his own shop and on the work he wishes them to do. Descriptive Catalogue and Price-List  
W. B. & JOHN BARNES CO., No. 3 Ruby St., Rockford, Ill.

THOMAS K. CAREY &amp; BROS., 24 Light St., Baltimore Agents.

ESTABLISHED 1832 ON PRESENT PREMISES.

The Best  
—IS—  
ALWAYS  
—THE—  
Cheapest.



Therefore  
BUY OUR  
COLOPHINE  
—OR—  
Perfect Oils

The above are our specialties in MACHINERY OILS, and are the best oils for  
the price manufactured. We can give you anything in the OIL LINE, any grade, at  
the very lowest prices. Correspondence solicited.

## WM. G. ROBINSON & SON,

MANUFACTURERS AND DEALERS IN OILS.

217 South Street Baltimore, Md.

## RIVETS

## HOOPES & TOWNSEND,

PHILADELPHIA, AND

The HOOPES &amp; TOWNSEND CO.

WILMINGTON, DEL.

Cone, Button, Flat, Rose, Counter-Sunk, Button Counter-Sunk and Steeple Heads.

BOILER,

SHIP,

CAR,



STACK,

BRIDGE,

TANK,

COOPER

## RIVETS

## UNION BRASS FOUNDRY, Lowell, Mass.

MANUFACTURERS OF ALL KINDS OF

Brass and Composition Castings, Babbitt Metals, &amp;c.

THOS. J. DELANY &amp; CO.

Special attention given to the manufacture of heavy BRASS CASTINGS. Send for estimates.



## PHOSPHOR-BRONZE

INGOTS, CASTINGS &amp; MANUFACTURES.

THE PHOSPHOR BRONZE SMELTING CO. LIMITED

512 ARCH ST. PHILADELPHIA PA. U.S.A.

ORIGINAL MANUFACTURERS OF PHOSPHOR-  
BRONZE IN THE UNITED STATES AND OWNERS  
OF THE U.S. PATENTS

## UNION DRAWN STEEL CO.

COLD DIE, ROLLED STEEL AND IRON

## SHAFTING.

Piston Rods, Pump Rods, Guides and Shapes.

OFFICE AND WORKS, BEAVER FALLS, PA.

## BRADLEY AND FORCES

BEST HAMMERS IN THE WORLD RUN BY BELT

OVER

1500

IN USE.

Three Styles, 15 lb. to 500 lb. Heads.

Our FORCES heat irons fast enough to keep Hammers

and Men fully employed. Send for Catalogue and Prices.

BRADLEY &amp; CO., SYRACUSE, N. Y.

14 WARREN ST. NEW YORK. 96 &amp; 98 SUDBURY ST. BOSTON.

## The D. E. Whiton Machine Co.

45 Oak St., New London, Conn.

—MANUFACTURE A—

SIMPLE, CONVENIENT,

ACCURATE and

MODERATE PRICED

## Gear Cutting Machine



Which will do ALL KINDS of Gear Cutting, including Worm  
Bevel and Face Wheels. It is in Extended Use through-  
out North and South, and FULLY WARRANTED.  
Sent on trial to responsible parties. Send for circulars.

## Build & Repair Your Machinery

BY USING

Engine Lathes, Planers,

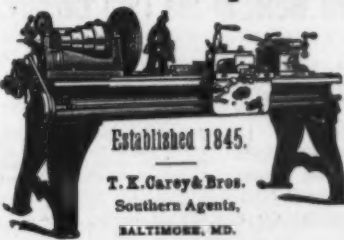
Chucking Lathes, Hand Lathes,

MACHINE TOOLS GENERALLY

MANUFACTURED BY

LATHE &amp; MORSE TOOL CO.

Worcester, Mass., U. S. A.



Established 1845.

T. K. Carey &amp; Bros.

Southern Agents,

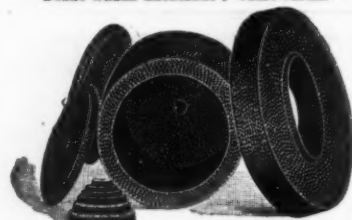
BALTIMORE, MD.

**Stuebner & Woods**

MANUFACTURERS OF

**Self-Dumping Steel & Iron  
Hoisting Tubs,**Side and Bottom Dumping  
Cars for Coal Elevators,  
Iron Wheelbarrows, Hoisting  
Blocks, Bottom-dumping Tubs  
for Coaling Locomotives, &c.LONG ISLAND CITY, N. Y.  
Send for circular and price-list.**SOAP & CANDLE  
MACHINERY**  
"THE  
HONEST  
HORSE  
RACE"  
AW. HOUGHIN.  
11 VINE ST.  
BROOKLYN, N. Y.  
SPECIAL  
MACHINERY  
DESIGNED.  
CATALOGUES FREE.**FINE SHOW CASES.**Ask for catalogue.  
TERRY MFG CO., NASHVILLE, TENN.**Emery and Corundum Wheels.**

HARVEY WHEEL MACHINERY &amp; FLINT PAPER.

All goods manufactured by us are guaranteed to  
give satisfaction. Give them a trial on their merits.  
Write for circular.**SPRINGFIELD EMERY WHEEL MFG. CO.**  
Successors to SPRINGFIELD GRINDING & EMERY WHEEL CO.,  
BRIDGEPORT, CONN.

Western Branch, 18 &amp; 20 Randolph St., Chicago, Ill.

**ROLLER and  
Detachable Chain Belting,**Detachable in Every Link,  
FOR IMPROVED**ELEVATORS,**

CONVEYERS,

AND  
Driving Belts

FOR HANDLING

Coal, Ores, Grain,

CLAY, BRICK, &amp;c.

ADDRESS

**The Jeffrey Mfg. Co.**

121 W. State St., Columbus, O.

**Stow Flexible Shaft Co., Limited,**

2220 Pennsylvania Ave.

PHILA., PA.

Manufacturers of

**FLEXIBLE SHAFTS,**  
AND ALL KINDS OF MACHINES  
TO BE USED WITH THEM.Portable Drilling, Tapping, Ream-  
ing and Boring Machines. Also,  
Portable Tools for Emery Wheel  
Grinding, Metal and Wood Polishing,  
Cattle Brushing and Clipping, &c.Builders of Special  
Machines

FOR

Railroads, Bridge

& Boiler Makers,  
Contractors, &c.**POWELL & LOCKWOOD,****General Dairy Supply House,**

112 Chambers St., New York City.

Every Requisite for Milk, Butter and  
Cheese Industries.  
Write for Catalogue.**DAIRY MACHINERY**

Complete Outfits a Specialty.

**H. McK. WILSON & CO.**

ST. LOUIS, MO.

Handsome Dairy Illustrated Catalogue mailed  
free on application.**WHICH? BUTTER OR  
CHEESE.**If either, or both, send for  
J. S. CARTER'S Illustrated  
Catalogue, which gives full in-  
formation of latest and best method  
and appliances for making Cheese  
or Butter, from the largest fac-  
tory to the small dairy.  
Carter's Cream & Buttering  
System of Butter Making is success.  
JOHN S. CARTER, Syracuse, N. Y.**R. M. JOHNSON,**Manufacturers' Agent and Dealer in Corliss,  
Automatic Cut-Off and Plain Slide Valve**Steam Engines and Boilers,**Saw Mills, Machinists' Tools, Wood-Working  
Machines, Mining, Brick, Ice, Grist Mill, Dairy,  
Canning and Electric-Lighting Machinery a  
Specialty; also Double Cylinder Traction En-  
gines. Complete outfits supplied at lowest prices.  
Correspondence is solicited.**R. M. JOHNSON, Waynesboro, Va.****INDUSTRY FILE WORKS,**  
A. & H. GOUGH, Proprietors,  
Manufacturers of**Files and Rasps**

Equal to the best English File.

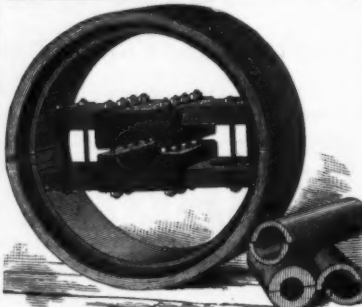
OLD FILES REOUT.

All kinds of Job Grinding.

OFFICE AND WORKS,

48 Columbus St., Cleveland, O.

C. GOUGH, Manager.



PATENTED MAY 29, 1888.

DOUBLE STRENGTH

**WOOD SPLIT PULLEY,**

MANUFACTURED BY

**Chattanooga Wood Split Pulley Co. Chatt., Tenn.****THE CHAMBERLIN  
Screw Stump Machine.**The only Stump Machine in  
the world that successfully  
pulls all classes and sizes of  
stumps. Write for catalogue  
and price list.MANUFACTURED BY THE  
**CHAMBERLIN MFG. CO.**  
OLEAN, N. Y.**S. E. CRAWFORD,**

NORWALK, OHIO.

MANUFACTURER OF

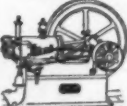
**Rubber Bucket Chain**

And Wood Force Pump Supplies.

Correspondence Solicited.

**The Motor of the 19th Century.**

2 to 40 H. P.

Economy, Reliability,  
Simplicity, Safety.Can be used ANY PLACE,  
to do ANY WORK, and by  
ANY ONE.No Boiler! No Fire! No  
Steam! No Ashes! No  
Gauges! No Engineer! No  
Danger! No Smoke!A perfectly safe motor for all  
places and purposes. Cost of  
operation about one cent an  
hour to each indicated horse-  
power. For circulars, etc.,  
address CHARTER GAS

ENGINE CO., P. O. Box 240, Sterling, Ill.

**STEAM HEATING.****Barnard's Condensing System**

will accomplish the following desirable features:

**SAVES COAL, PERFECTS****THE CIRCULATION,****PREVENTS ALL NOISE,****PREVENTS FREEZING,**Uses Exhaust Steam if any, without back pres-  
sure, will work at any pressure of steam, high or  
low, has no machinery needing care. Is adapted to  
Private Houses, Flats, Office Buildings, Hotels,  
Factories, &c.**GEO. A. BARNARD, 15 Cortlandt St., N. Y.****Reducing Valves**Ours are the Standard  
used by the American and  
Southern Cotton Oil Com-  
panies and over 30 Rail-  
roads.

SEND FOR PRICES.

**Damper Regulators,  
Pump Governors, Etc.****Mason Regulator Co.**  
BOSTON.**We Blow Our Own Horn**Because we have to do so,  
and while you listen you can hear us say**"JONES, HE PAYS THE FREIGHT"**

on the best SCALE made.

**5-ton Cotton Gin Scale \$60.**

For terms and prices on the

**UNITED STATES STANDARD SCALE.**

Buy of your jobber or address

**JONES OF BINGHAMTON, Binghamton, N. Y.****The WELLINGTON BELT HOLDER.**

LATELY

IMPROVED.

Just the thing  
to shift large  
belts driving  
Dynamoes, Blows,  
Gins, Saws,  
&c. Belt stops  
and slackens  
when machine  
stops. Thous-  
ands in use, cost  
very low. Sent  
on trial. Permit  
us to quote you  
prices.**W. R. SANTLEY & CO. Wellington, Ohio****TAPER-SLEEVE PULLEY WORKS**

211 W. 12TH ST.

ERIE, PA.

Manufacturers of  
Taper-Sleeve Wood  
Belt Pulleys, Adjust-  
able Dead Pulleys,  
Friction Clutch Pul-  
leys, Friction ClutchCouplings, Wood  
Pulleys in Halves,  
Taper-Sleeve and  
Compression Cou-  
plings, Shafting, Post  
and Drop Hangers.  
Correspondence sol-  
icited.**BERNHARD DIETZ, Manufacturer of Printers' Rollers  
and Roller Composition.** Factory, R. E. Cor. Grant  
and Mercer Sts., Baltimore. Prices: Composition (bulk)  
10 cents per pound; for casting, also 30 cents per pound.  
Orders by mail promptly attended to.**SHEPARD'S New \$80 SCREW-CUTTING FOOT LATHE**  
Foot and Power Lathes, Drill  
Presses, Scroll Saw Attachments,  
Chucks, Mandrels, Twist Drills,  
Dogs, Calipers, etc.  
Lathes on  
payment.  
Send for catalogue of Outfits  
for Amateurs or Artisans.  
Address **M. L. SHEPARD, Agent,**  
134 E. 2d Street, Cincinnati, Ohio.**IF YOU ARE  
BUILDING**

Write us for a copy of our book on

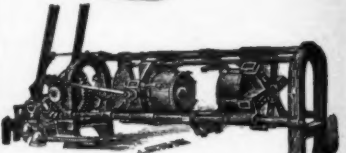
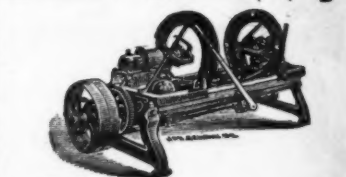
**"A TIN ROOF"**

ALSO OUR

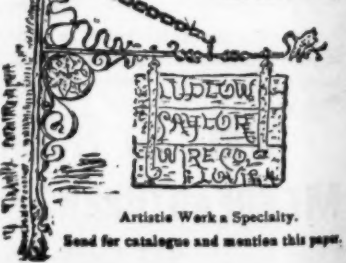
**"FORMULAE,"**Containing full information about  
tin roofing; showing how to select,  
lay and paint, and how to specify for a  
tin roof in order to obtain best results.Either or both Pamphlets sent  
**FREE OF COST.**If your building needs ventilation,  
or you are troubled from downward  
draft in your chimney, write us for  
information relative to our**STAR VENTILATOR.****MERCHANT & CO.**PHILADELPHIA.  
NEW YORK.CHICAGO.  
LONDON.**E. & B. HOLMES,**

BUFFALO, NEW YORK,

MANUFACTURERS OF

**Barrel Machinery.****Chambers Patent Barrel Heater.**Capacity 300 tight or 500 slack barrels per day.  
The best Heater made.**E. & B. HOLMES, Sole Agents.****WIRE RAILING**

and Ornamental Wire Works.

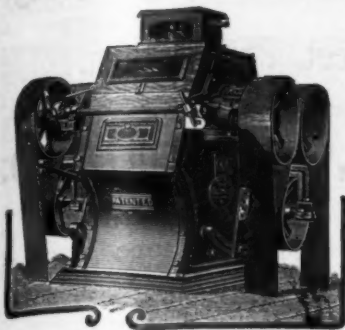
**JUPITER & CO. 113 & 115 N. Howard St., Baltimore.**Wire Railing for Cemeteries, Lawns, Gardens, Of-  
fices and Balconies; Window Guards, Tree Guards,  
Wire Cloth, Sieves, Fenders, Cages, Sars and Cast  
Screens, Iron Bedsteads, Chairs, &c.**WIRE & WIRE GOODS.**Wire Cloth, Rope. SCREENS for  
Coal and Ores. Barbed and  
Plain Fencing Wire, Rail  
and Office Railings.

Artistic Work a Specialty.

Send for catalogue and mention this paper.



# Read What a New York Miller Says of the Case Company.



OFFICE OF PETER SNYDER,  
DEALER IN FLOUR, FEED AND LUMBER,

MANLIUS STATION, N. Y., October 26, 1899.

The Case Manufacturing Company, Columbus, Ohio:

GENTLEMEN: After running my mill over two months, I feel it my duty and in justice to you to state that I am more than pleased with the mill you built for me. It started like a clock "from the word go". My flour is discounting the fanciest brands of flour in the market. My clean-up is equal to any mill in the State. I will say that the Case Rolls and Flour Dressers cannot be beaten in the world for light running and ease of access to all their parts. I would advise any miller building a new mill or remodeling an old one to place their contract with the Case Company.

Thanking you for the prompt and efficient manner in which you furnished my machinery in so short a time, after so great a loss and damage by fire burning your works, and with the best of wishes I remain,

Yours respectfully,

PETER SNYDER.

For full particulars regarding the best FLOUR OR CORN MILL MACHINERY, address

## THE CASE MANUFACTURING CO., Columbus, Ohio.

### Brick-Dust Cement.

In reply to the correspondent who wishes to know if a hydraulic cement can be made by using brick-dust as a component, the Manufacturer and Builder gives some information which may be of value to many of our readers. With the eminent authorities cited in support of the proposition, brickmakers in the South can well afford to make trial tests of the formulas given in the following extract:

Ordinary brick-dust, mixed with lime and sand, affords a tolerably good substitute for hydraulic cement, the brick-dust mortar being decidedly, though not strongly, hydraulic. In his "Engineer's Pocket-book" Trautwine recommends its employment in all cases where hydraulic cement cannot be obtained. In experiments made by him with mixtures of brick-dust and quicklime, he found that blocks of one-half inch in thickness, after immersion in water for four months, bore, without crushing, crumbling or splitting, a pressure of 1,500 pounds per square inch. He appears to have been thoroughly convinced of the merits of this material from his experiments, since he recommends the addition of small quantities of it to ordinary cement and mortars. He believes that the addition of even as small a proportion as one-tenth as much brick-dust as sand to our ordinary mortars, would prevent the disintegration so generally visible in the mortars used in the masonry of many of our public works. We have similar testimony as to the value of this material from quite independent sources. The use of brick-dust mixed with lime and sand is said to be very generally and successfully practiced in the Spanish dominions as a substitute for hydraulic cement. F. B. Miles, now of Philadelphia, but who has spent a number of years in Cuba, engaged in engineering work, and who has had abundant opportunity of testing the merits of the material, states, as his experience, that it is in all respects superior to the best Rosendale hydraulic cement for culverts, drains, tanks or cisterns, and even for roofs, whether for setting flat tiles or for making the usual tropical flat roof. It is known in that country as a regular article of commerce. The proportions used in the manufacture, are, approximately, one of brick-dust, one of lime and two of sand, mixed together dry and tempered with water in the usual way. Mr. Miles expresses the opinion, in a communication on this subject some years ago, that as this material could be produced at a lower cost than cement, it should prove a profitable plan to utilize the waste and broken bricks by setting up pulverizing mills in all large brick-yards. This suggestion we regard as a very practical one, and commend it to the notice of enterprising manufacturers as worthy of their serious consideration.

### TRADE NOTES.

AN experienced and highly educated chemist advertises in another column for a position. Information can be had by addressing "K." care Fels & Co., 1151 North Third street, Philadelphia.

H. K. PORTER & CO., Pittsburgh, Pa., are building a number of large motors for Birmingham, Ala. This firm are also building a number of mining engines for different companies in Mexico.

THE Universal Radial Drill Co., of Cincinnati, Ohio, sends us a neat calendar for July, on the face of which is an excellent cut of this popular machine. On the back of the card is a picture of the works of the company.

THE Richmond City Mill Works, Richmond, Ind., have recently secured contracts for the erection of complete flouring mills from the Lewisburg Mill Co., Lewisburg, Tenn., and also from the Farmers' & Laborers' Union Mill Association, of Lincoln county, Tenn. They have also started up a fine 100-barrel mill for the Lonsdale Mill Co., of Knoxville, Tenn.

F. E. MYERS & BRO., manufacturers of the Myers force and lift pumps, Myers reversible wood and steel track, hay carriers, etc., Ashland, Ohio, are placing a new brick addition to their foundry, which will make the foundry, when completed, 175 feet in length. This firm are very busy, running night and day to keep up with their orders. They have been established in this business about eight years.

THE Standard Tool Co., Cleveland, Ohio, report a remarkable increase in sales of twist drills, &c., during the past six months. They are just issuing the second edition of their 1890 catalogue, giving full description and list prices on twist drills, reamers, chucks, taps, milling cutters, sockets, gauges, &c. This company also make a specialty of manufacturing special tools in quantities and reamers, taps, milling cutters, &c., for railroad and locomotive work.

THE Niagara Stamping & Tool Co., Buffalo, N. Y., are so busy at the present time that they are compelled to enlarge their plant by the addition of a foundry 50x80 floor space, equipped with all the latest and most improved devices for supplying them with the large amount of castings that they annually use. They will, therefore, be in more efficient condition hereafter for supplying the orders of their patrons than they have been in the past. During the last few months they have been favored with an unprecedented large number of orders for squaring shears of all descriptions, chiefly, however, of the heavy variety such as are used in heavy sheet metal rolling mills, &c.

A. L. IDE & SON, Springfield, Ill., report the following sales and shipments of their Ide and Ideal engines in the South: The Prescott Co., Atlanta, Ga.; Camden Electric Light & Power Co., Camden, Ark.; Riverton Land Co., Sheffield, Ala.; Texas Ice & Cold Storage Co., Galveston, Texas; Shreveport Street Railway & Land Co., Shreveport, La.

WM. E. HILL & CO., Kalamazoo, Mich., manufacturers of saw mill machinery, are doubling the capacity of their works, putting in a large number of new tools, and will soon be in shape to fill orders on short notice. Their Mr. A. S. Hill is now making an extended trip through the East, while their Mr. A. J. Carson has just returned from the Pacific coast, where he made large sales of their saw mill machinery.

THE Frey-Sheckler Co., Bucyrus, Ohio, are making large shipments of their brick-making machinery. We note that large outfits have been shipped to Chicago, Ill., Louisville, Neb., for Omaha parties, Davenport, Iowa, Rock Island, Ill. The last-named plant was arranged to be run by electricity, but the Electric Power Co. did not materialize in time, so steam had to be adopted. Also shipped machinery to Buffalo, N. Y., Franklin and Freedom, Pa., and a number of other places in the East as well as in the South.

CHANDLER & TAYLOR Co., Indianapolis, Ind., manufacturers of engines, boilers, saw mills, etc., report their trade in self-contained and semi-portable engines having increased in such a marked degree during the past year as to require an addition to both their foundry and machine shops, requiring new tools of the latest and most approved pattern, which will greatly increase their output. Within a month this firm will begin the erection of a large warehouse for the storage of the manufactured engines, as the old rooms are required for further machine shop extension.

THE special sectional illustrated catalogue of Sturtevant's steam hot blast drying and heating apparatus as applied to drying lumber, etc., warming and heating buildings, etc., is at hand. These machines are manufactured by B. F. Sturtevant, 34 Oliver street, Boston, with branch offices in New York, Chicago and London. This catalogue is very complete in its description of this apparatus, and a practical man could, at a glance, take in the whole mechanism of the thing and see what a practical, simple arrangement it is. Copies of this catalogue and further information can be had by applying to Mr. Sturtevant.

MESSRS. J. W. PENFIELD & SON, manufacturers of clay-working machinery, Wilmoughby, O., report a large and satisfactory business thus far this season. Among their recent shipments to Southern points were an upright stock brick machine and

pug mill to Lynchburg, Va.; an upright stock brick machine and pug mill with line shafting, pulleys, etc., to Columbia, S. C.; a No. 7 special brick machine and No. 3 crusher to Hope, Ark.; two No. 4 crushers to Manchester, Va.; an upright stock brick machine, line shafting, hangers, etc., to Natchitoches, La.; a No. 10 crusher and No. 20 pug mill to Stevens' Pottery, Ga.; paving brick plant to Robbins, Tenn., including a No. 20 pug mill and No. 20 brick machine; a No. 10 stock brick machine to Newport News, Va.; two pug mills to Salem, Va., and a No. 3 crusher to Adamsville, S. C. This firm also have an order for early shipment for an upright stock brick machine and pug mill to the Southern Orphan Asylum, Lynchburg, Va. The demand has been such for their clay-working machinery as to put them behind on orders, as they have some large orders yet unfilled.

### Cardiff Notes.

CARDIFF, TENN., July 13, 1899.

It is not known what the census will develop, but it is known that the Cardiff post-office transacts a business equal to a town of 3,000 population, and already a good start has been made in the race for a presidential office. The cancellation of the last 60 days amounts to \$214.32, a pretty good sign that there is some business being done in Cardiff.

It has been warm here the past few days, but nothing to what it has been in the North. There has not been a single case of heat prostration, and full time has been made on all kinds of work. There is something in the air of the mountains which carries strength and health in every breath.

The Cardiff Bank & Trust Co., which began operations last week, has a large line of deposits and is transacting a big volume of business. Until the bank's new block on Tennessee avenue is completed temporary quarters are provided in exposition hall. The cashier of this institution is L. C. White, Jr., formerly of Windsor, Vt.

The lumber business of Cardiff is considered quite extensive, the average weekly receipts of cars being 30. Add to this the cars of other material and merchandise constantly arriving and one gains some knowledge of the business transacted at this station. Then there are a great many shipments made from Cardiff, including brick, lime and ore. The daily ore shipments averages over 20 car-loads. Freight receipts for May were nearly \$3,000. The footing for June is not yet completed, but it will be larger than May. The tonnage in May, although high, will be increased by the report for June, and the total business, telegraph, express and freight, will also raise the sum of last month \$3,753.

The plans for the Commercial Club rooms have been prepared by Architect Bosworth and are ready for approval. One feature of the club's quarters is that all the rooms, which are en suite, can, when needed, be thrown into one large room 70 feet long.



## The Markets.

OFFICE MANUFACTURERS' RECORD,  
BALTIMORE, July 9, 1890.

The first week of July has not developed a single interesting feature in the entire iron trade. Nearly all users of iron and steel products are following the wise policy of carrying moderate stocks, and nearly all buyers have contracts out calling for the delivery of material through the summer, and there is, therefore, no occasion for them to place heavy orders at this time. It is not likely that business will assume heavy proportions for two or three weeks to come. Northern iron makers are interested in the prevailing activity in blast furnace construction in various sections, and buyers are beginning to take note of the fact that a good many new furnaces are to be in blast within a few months. What they want to know is just what effect this increased output is likely to have upon prices, but it is quite probable that the increasing demand for iron will prevent any material drop in quotations. Throughout the South there is great activity in iron making, but some difficulty is experienced in obtaining cars promptly enough to meet the requirements of consignees. Most of the Southern railroad companies are in need of additional rolling stock, and we learn that they contemplate placing large orders during the fall. A large number of new mills and foundries are being hurried to completion throughout the South, and the demand for crude iron will thereby be permanently increased. The Northern iron markets are in a healthy condition. Stocks are of moderate proportions everywhere. Mills are running full time, with the exception of a few days' stop this week for repairs, but a general resumption will take place next week, and it is not likely that there will be any cessation of activity before the close of the year. The bar mills are all pretty well supplied with orders, but prices are at about the lowest point known for 12 months, viz., 1.65 to 1.85 in the East, and probably one-tenth lower at Pittsburgh. Eastern Ohio mills are doing an excellent business. Allegheny county's 21 furnaces are turning out 3,600 tons of pig iron per day, and five additional furnaces will shortly begin blowing, adding about 1,000 tons per day to the output of the district.

The merchant steel and steel rail mills are all oversold, and the demand for the products of these mills seems to be on the increase; especially is this true with reference to the material used in the manufacture of agricultural implements and machinery. The nail factories East and West are running full, but prices are very low, owing to the sharp competition among makers. The plate mills are crowded with work, and from present advices some of the heaviest orders of the season will be placed within a week or two. Large bridge iron contracts are also shortly to be placed. A great deal of bridge work is contemplated. Small lots of steel rails are quoted at \$32; large lots, \$31 to \$31.50 in Eastern mills. There is urgent inquiry for old rails both at home and abroad, but the supply is light. It will be some days before a decided improvement is to be expected in the market, and in the meantime manufacturers are indifferent.

### HARDWARE.

Orders from the interior are larger and more frequent than for some time past, and from all sections of the South reports are encouraging. The stiffening in the price of iron and steel checked further declines in manufactured goods and gave a firmer tone to the market. The new price on common carriage bolts, i. e., 70-10-7½ per cent. discount, is being firmly held by the association. There are no changes in the market prices on any line of importance. Tacks are more or less unsettled, and from present indications low prices will continue.

**CHEMIST** wants position anywhere at low salary to begin. Is a graduate of Munich, Germany. Speaks English and German. Good all-round chemist and ready to make himself generally useful. Quick to adapt himself to special work, and is well recommended. Address "K," care of Fels & Co., 1151 N Third Street, Philadelphia, Pa.

### WANTED.

The right to manufacture and put upon **Saw Mills an Improved Set Works** to work both simultaneously and independent, also pattern for headblocks. Address **Box 56,** Broadway, Va.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M. on the 29th day of July, 1890, for all the labor and materials required to do all the general excavations and concrete work for the foundations of the U. S. Customhouse and Postoffice building at New Bedford, Mass., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$100. The Department will reject all bids received after the time fixed for opening the same, also bids which do not comply strictly with all the requirements of this invitation. Bids must be enclosed in an envelope sealed and indorsed "Proposal for the Excavation and Concrete Work for the Foundations of the U. S. Customhouse and Postoffice building at New Bedford, Mass.," and addressed to JAS. H. WINDRIM, Supervising Architect. July 7th, 1890.

### AMERICAN

**PIG IRON Storage Warrant Co.**

(Bank of America Building.)

44 Wall Street, NEW YORK.

Correspondence of Furnaces Invited.

### NASHVILLE RAPID TANNING

AND

**BELT MANUFACTURING CO.**

Manufacturers of Oak Tanned and Rawhide Leather Belting, Lace Leather, Picker Leather, Ropes, Lariats and other Rawhide Leather Goods. NASHVILLE, TENN.

**BELTING** Southern Agents—Hoyt's Pure Oak-Tanned Leather Belting, The New York Belting & Packing Co., The Gandy Belting Co. and Excelsior Raw Hide Lace Leather. The largest stock south of New York, assuring prompt shipments. Write for prices.

**BAKER, SLOO & CO.**  
NEW ORLEANS, LA.

**SLIPPING and SWEARING**  
PREVENTED BY USING  
**DIXON'S BELT DRESSING**  
And Leather Preservative.

Absolutely prevents slipping, thoroughly preserves the leather. Not a new and untried article. It will pay you to send for circular and testimonials.

Jos. Dixon Crucible Co., Jersey City, N. J.

**PICKANDS, MATHER & CO.**  
**Pig Iron, Iron Ore and Coal.**

Perry-Payne Building,

CLEVELAND, OHIO.

For one dollar, currency or stamps, we will send to any part of the United States, express charges paid, our perfect Grease Cup. It is light, and forces all the grease out of the cup without being touched. We send sufficient grease for trial. The cup is well finished, and is an ornament anywhere. One cup of grease will do the work of six cups of oil. For loose pulleys, crank pins, etc., it has no equal. **CHESEBROUGH MFG. CO.,** Cleveland, Ohio.

**EDWARD ALLEN,**  
**Practical Lead Burner**  
BALTIMORE, MD.

Sulphuric Acid Chambers constructed on the latest improved plan. Strict attention given to the Lead Work of Concentrating Apparatus. P. O. BOX 84. ESTIMATES FOR THE ABOVE GIVEN.

### JUST PUBLISHED.

**THE METALLURGY OF STEEL**

By H. M. HOWE.

Royal Quarto, 380 pages, handsomely bound in cloth, gilt, copiously illustrated.

Price \$10.

"The greatest work ever written on the subject."

Absolutely Indispensable to Everyone Engaged in the Making and Using of Iron and Steel.

PUBLISHED BY THE  
**SCIENTIFIC PUBLISHING COMPANY,**  
27 Park Place, New York.

## Philadelphia × Warehouse × Company,

No. 235 Dock Street, Philadelphia.

**CAPITAL, \$1,000,000, FULL PAID.**

This Company makes advances upon Pig Iron stored at Furnaces (storage charge being nominal) or in Public Warehouses, upon reasonable terms, Particulars upon Application.

F. M. POTTS,  
Sec. and Treas.

R. H. FILE,  
Superintendent.

BEAUVEAU BORIE,  
Vice-President.

HARRY F. WEST,  
President.



The "Original Candy"

Sawed Cotton Duck Belting,

Especially adapted for Main Drivers, Saw Mills, Cotton Gins, Cotton Presses, and in all places where belts are subjected to moisture or atmospheric changes, the "CANDY" stands paramount.

For further information, prices, etc., write

The Candy Belting Co.,  
BALTIMORE, MD.

SOUTHERN AGENTS: Smith & Courney, Richmond, Va. Atlanta Rubber Co., Atlanta, Ga. Baker, Sloo & Co., New Orleans, La.

**THE BEST & CHEAPEST**

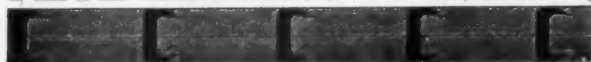
**BELTING**

**IN THE WORLD**

STITCHED CANVAS BELTING

THE CHESAPEAKE BELTING CO.  
BALTIMORE, MD.

**PAGE BELTING COMPANY,**



WARRANTED  
A1  
STANDARD  
MADE BY  
PAGE BELTING CO.

SECTION OF COPPER WIRE-SEWED LIGHT DOUBLE BELTING.

We Manufacture all the staple and of Leather Belting, including Also the "HERCULES" Lacing. The Hercules is lacing; combined Raw Hide and of Send for Catalogue Grades of Belting to use



special grades Acme Link and Eureka Dynamo and the PATNA BRAND Lacing, mechanically made; is a belted the good qualities of ordinary Page's Patent. Try it. No. 31, describing the "Kinds and for Different Kinds of Work."

CONCORD, N. H., U. S. A.

BRANCHES—Boston, New York, Chicago, St. Louis and San Francisco.

**SLOO & CO.**  
MANUFACTURERS OF

IT BELTS THE EARTH AND MAKES THE MOON SPIN LIKE A TOP.

OUR BELTING IS TANNED ON THE SURFACES ONLY. INTERIOR IS RAWHIDE. The only Perfect Belting made No slipping or lost motion.

FOR OUR VALUABLE BOOK, FREE.

ST. LOUIS, MO.

ALSO RAWHIDE LACE LEATHER.

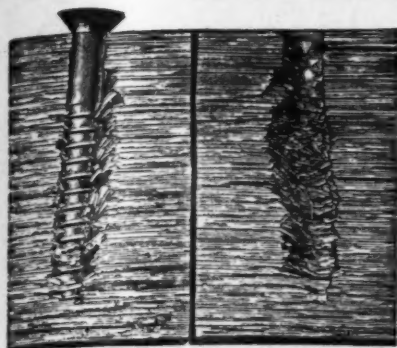
—AGENTS IN ALL CITIES—



# AMERICAN SCREW CO., PROVIDENCE, R. I.

## "ROGERS' DRIVE SCREWS."

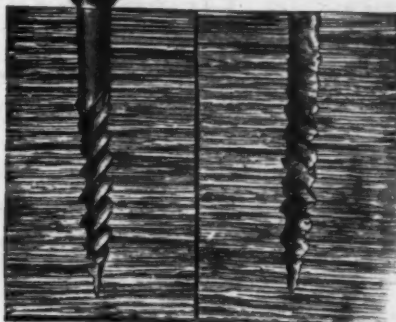
Patented May 10, 1887; July 29, 1887;  
July 10, 1888. Other patents pending.



A common cut thread screw as ordinarily inserted—i.e. driven two thirds of its length with a hammer and the balance with a screw driver. Fibres of the wood are necessarily broken, and the holding power of the screw is impaired.



The "ROGERS' DRIVE SCREW" driven with a hammer its entire length. It revolves as it goes in and does not break the fibres of the wood, but makes its own nut of the cavity it forms.



WIER & WILSON, Agents, Baltimore, Md.

The foregoing illustrations speak for themselves, but we call attention to a few advantages of the "ROGERS' DRIVE SCREWS."

1. Stiffness, adapted for driving with a hammer.
2. Rapidity of insertion.
3. Increased holding surface.
4. Ability to be driven with hammer and withdrawn with screw driver numerous times from same hole.
5. Superior head, which will withstand blows of a hammer and not impair the slot.
6. Improved slot, admitting the use of a heavier screw driver.
7. A Rogers' Drive Screw of small diameter will hold as much as a common screw of a larger diameter.

Discount 66 2/3 per cent. from list of common screws.



The Akron Improved Hot Blast Heating Apparatus.  
As Applied to Factory Buildings.

## A Word About Heating and Ventilation of Buildings.

The value of a good indirect heating plant when supplied by forced circulation is difficult to appreciate by those who have not drawn comparisons, or made the subject a study. This system is not an experiment, and is endorsed by the highest authorities on the subject. It is an important step in the direction of sanitary reform for heating factories, mills, schools, theaters, public buildings, &c. The advantages of this system are numerous. It is practicable, convenient, easy of regulation, compact, cleanly and far more economical than any other system. A CONSTANT CURRENT OF WARM, FRESH AIR is evenly distributed to every part of the building, and the air is changed every ten or fifteen minutes. This same system of heating can be made a perfect ventilator, and should be considered by owners and projectors. We are prepared to equip mills complete with this system, and guarantee results. Our HOT BLAST STEAM HEATING APPARATUS costs less than the ordinary method of heating by steam pipes and radiators. Write for catalogue and full particulars.

The AKRON HEATING & VENTILATING CO., Akron, O.

## VAILE & YOUNG'S Patent Metallic Skylights.



Without Putty  
Construction adapted to all forms and styles of Skylights. Thousands of feet in use have proved its superiority. Particularly adapted for Depots, Mills, Factories, etc., where large and continuous lights are required. Send for illustrated catalogue.

306 & 311 NORTH STREET, BALTIMORE, MD.

## METAL SKYLIGHTS

Made of galvanized iron and copper. Absolutely no leakage from any source; no dripping or sweating; fire-proof; ventilating. Galvanized iron and copper cornices and gutters, sheet metal work for buildings. Send for illustrated circular.

E. VAN NOORDEN & CO.,  
383 Harrison Ave. BOSTON, Mass.

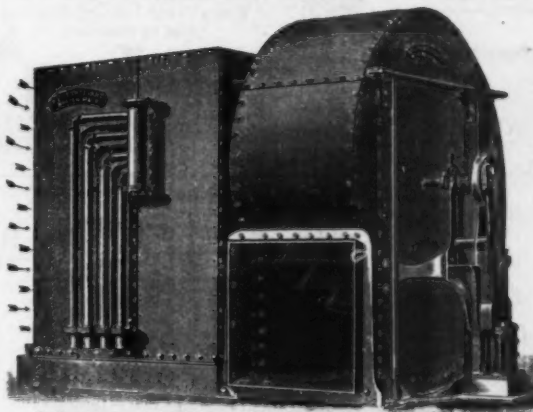


## The Sturtevant Steam Hot Blast Apparatus

—FOR—

## Heating AND Ventilating

Public and Office Buildings, Stores and Manufacturing Establishments of all classes, and for drying Wood, Wool, Cotton, Tobacco, Glue, Grain, &c. Send for illustrated treatise on Ventilation and Heating.



Sale room, 34 Oliver St., Cor. Franklin, Boston.  
Branches—91 Liberty Street, New York; 31 N. Canal Street, Chicago.

B. F. STURTEVANT,  
BOSTON, MASS.

## RICHMOND CITY MILL WORKS, RICHMOND, INDIANA,

— MANUFACTURERS OF —

## FLOUR MILL MACHINERY

IN ALL ITS BRANCHES

A Majority of the Best Flour Mills in the South Equipped by this Company.

CORRESPONDENCE SOLICITED.

## BUY Cheapest FROM STEEL WRITE

MANLY MFG. CO., Dalton, Georgia.

RAILINGS, GATES, POSTS, CRESTINGS, JAILS, ROOFS, STAIRS, Lintels, Sills, &c. All Latest Improvements.

Subscribe to the **MANUFACTURERS' RECORD.** Price \$4.00 a Year,  
Or Six Months for \$2.00.



—THE LEADING HOUSE.—  
**H. WM. DOPP & SON,**  
 —MANUFACTURERS OF—  
**Soap Makers' and Butchers' Machinery,**

**462 Ellicott Street, Buffalo, New York, U. S. A.**

Swing Foot Lever Soap Presses, Nos. 1 and 2. Combination Foot and Steam Power Soap Presses. Improved Soap Remelting Cutchers, either with or without 8 Horse Power Engine attached. Seamless Steam Jacket Kettles. Steamed Jacketed Toilet Soap Kettle, with Agitator (three different styles). Steam Jacketed Rendering and Refining Kettles. Steam Jacketed Kettles for Confectioners.

Improved Lard Dryer, Mixer and Cooler. Steam Jacketed Vacuum Pans. Hotel Kettles for Boiling and Steaming in Hospitals, Institutes, Barracks, Hotels, Asylums, &c., &c. Steam Jacketed Glue Pot Heaters. Iron Soap Cutting Frames, with Adjustable Wires. Soap Dies, for Stamping and Moulding the Soap. Hand Stamps, Steam Traps, with Balanced Valve, &c.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE ON APPLICATION.

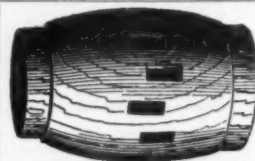
MENTION THIS ADVERTISEMENT.



**PIERCE, BUTLER & PIERCE MFG. CO.,**  
 MAIN OFFICE, SYRACUSE, N. Y., U. S. A.  
 NEW YORK BOSTON CHICAGO  
 60 Barclay St. 237 Franklin St. 96 Lake St.

**FLORIDA HEATING APPARATUS**

Made in 10 Sizes for Steam. For STEAM or WATER, HARD or SOFT COAL.  
 Made in 14 Sizes for Water. THOUSANDS IN ACTUAL USE  
 Made in 15 Sizes for Soft Coal.  
 LOCAL AGENCIES: WASHINGTON, D. C.—N. L. CHAPPELLE & Co.  
 BALTIMORE, MD.—ALVA HUBBARD & Co.  
 KANSAS CITY, MO.—GROSS HEATING & PLUMBING CO.  
 ST. LOUIS, MO.—N. O. NELSON MFG. CO.  
 EUROPEAN AGENCIES: ROBERT DAWSON & Co. Limited, ST. ALBY BRIDGE, ENGLAND.  
 A. B. RECK, COPENHAGEN, DENMARK.  
 Write for our 3 catalogues.



**R. M. WHITNEY,**  
 MANUFACTURER OF  
**BLACK BIRCH HUBS,**  
 OLEAN, N. Y., U. S. A.

These Hubs are made in sizes from 6x8 to 16x18 inches, and are especially adapted to dry climates.  
 Send for Circular and Prices.



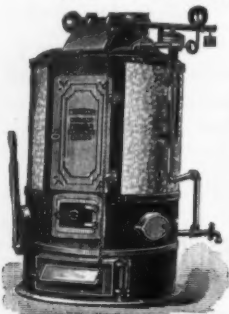
**Covert Web Goods, Rope Goods, Snap and Chain Goods**

bear the above TRADE MARK, and are sold by all LEADING JOBBERS at Manufacturers' prices.

**Covert Manufacturing Co. West Troy, N. Y.**

**MORGAN'S IMPROVED STEAM AND HOT WATER HEATING BOILERS,**

MANUFACTURED BY  
**THE D. F. MORGAN BOILER COMPANY, AKRON, OHIO.**



**Points of Superiority.**

Being sectional it can be taken into any building. Magazine being surrounded by water surfaces is not liable to burn off, and being in sections can be removed and replaced where ceilings are low.

It is the only return flue boiler having clean-out door, through which the internal fire surfaces may be thoroughly cleaned in five minutes. Each flue for cleaning has a separate stopper, so that there is no escape of dust during the operation.

It will carry steam 12 hours without attention. It will positively do the work it is rated to do. The circulation of steam or water is positive and noiseless. It is thoroughly well made of the best materials. All things considered it is the lowest-priced boiler in the market.

N. B.—The feature of a clean-out door on a return flue boiler is conceded by the most prominent engineers to be of the utmost importance. In fact one of the most important improvements connected with heating boilers.

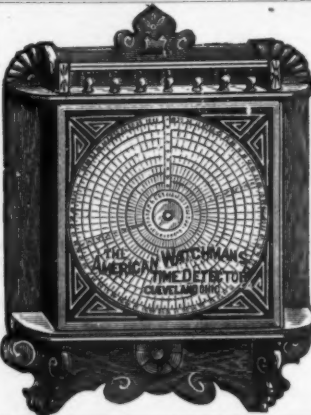
**THE PITTSBURGH BOILER SCALE RESOLVENT** is the only Boiler Compound that does not act chemically, and is equally good for all kinds of water. Costs but ten cents a week for each fifty horse-power. Send for circular to

**PITTSBURGH BOILER SCALE RESOLVENT CO.**

72 Verner Building, PITTSBURGH, PA.



**FRED. J. MEYERS MFG. CO.,**  
 COVINGTON, KY., Manufacturers of  
**WIRE GOODS OF ALL KINDS,**  
 Wrought-iron Fencing, Cresting and Hardware Specialties.  
 Send for Illustrated Catalogue and Price List.



**THE AMERICAN Watchman's Time Detector.**

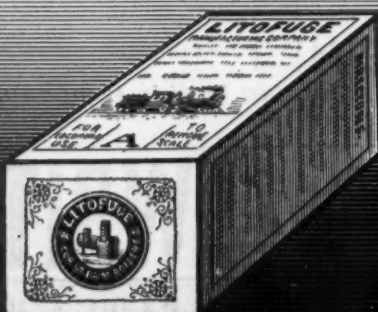
This Electrical Instrument, which is operated by either battery or magneto generator as preferred, is designed to, and does, keep an exact record of the doings of the Night Watchman in any establishment where it is in use. It is an active and faithful guardian of your premises during the night. It is simple, reliable and absolutely infallible. Cannot be tampered with without certain detection.

Thousands of testimonials from the first concerns in the land. Send for catalogue to

**The Cleveland Electrical Mfg. Co.**

44 and 46 Sheriff Street,  
 CLEVELAND, O.

JAS. L. DAUGHERTY, Genl. Manager.



**Litofuge**  
*is the best boiler compound.*

LITOFUGE MANUF'G CO. 62 JOHN ST. NEW-YORK.



# The Cincinnati Corrugating Co.

Box 226, Piqua, Ohio.

MANUFACTURERS OF

## Superior Iron and Steel Roofing

SIDING, CEILINGS, ARCHES, LATH, Etc.

Furnish Light and Heavy Corrugated Galvanized Plates of Special Pattern promptly to order. Correspondence Invited.

**HOLTON IRON ROOFING**  
ROOFING SIDING. CEILING & C.  
NEW LISBON, O.  
AGENTS WANTED EVERYWHERE

**SYKES' IMPROVED**  
Best Roof in the World.  
Suitable for all classes of buildings.  
Easy put on.  
**SYKES IRON ROOFING CO., NILES, OHIO.**  
Send for Circular and Price List, and mention this paper.

All my Iron and Steel is re-rolled and box annealed, well painted on both sides with the Best of Paint and Pure Linseed Oil.

## The Kanneberg Roofing Co., Canton, O.

(The Originators of Strictly Genuine Steel Roofing.) MANUFACTURERS OF

The **KANNENBERG PATENT**, Latest Improved **Folded Lock Seam**, Strictly Genuine Steel Roofing.  
Write for Catalogue, Price List and Samples.

**CORRUGATED IRON**, (FOUR SIZES OF CORRUGATIONS.)  
Crimped Edge Iron Roofing and Siding, Beaded Iron Siding and Ceiling, Water Proof Building Paper, Ready Mixed Paints, Etc.

## THE BERGER MANUFACTURING COMPANY, CANTON, O.

**BERGERS LOCK SEAM STEEL ROOFING**

**DON'T** make arrangements for ROOFING 'till you have seen ours.  
It Excels all other Metal Roofs

## METAL ROOFING, SIDING AND CEILING.

FIRE-PROOF SHUTTERS AND DOORS.

## SHEET IRON AND SHEET STEEL,

Corrugated, Black, Painted & Galvanized.

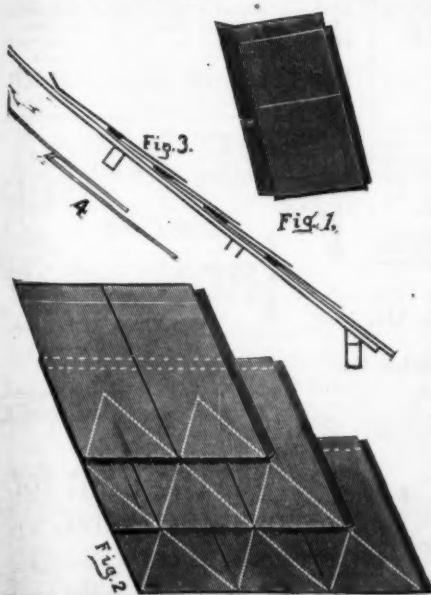
Don't buy without sending for our Prices and Catalogue.

**WHEELING CORRUGATING CO., Wheeling, W. Va.**

## Felt-Lined METAL Shingle.

Tegethoffs' Patent, No. 334,624, dated January 19, 1886.

## PATENT FOR SALE.



A Fire and Storm-Proof Roof weighs less than 200 pounds to the square; is not effected by expansion or contraction; painted on both sides and felt lined under gives a perfect protection against condensed moisture on the underside of the metal; is easily and rapidly laid, and requires no skilled labor in the manufacture nor its application. A complete metal shingle 10x18 inches laid 8 inches to the weather, giving a double thickness of metal and felt, making a solid and compact roof that will be warm in the winter and cool in the summer. Will last as long as the building stands without repairs except paint on the outside.

For particulars address

**FRANK RANDEL,**  
97 Bridge Street,  
CLEVELAND, O.

## FIRE-PROOF WATER-PROOF WIND-PROOF GUTTA PERCHA ROOFING!

The Great Roofing for the South. Send for Southern Manufacturers' References. For Steep or Flat Roofs, Factories, Mills, Lumber Sheds, etc. Send for Catalogue, Testimonials, Samples, etc.

**Empire Paint & Roofing Co.,** 111 N. FOURTH STREET, Philadelphia, Pa.

## CAMBRIDGE ROOFING COMPANY, Cambridge, Ohio.

MANUFACTURERS OF Plain Rolled, Crimped Edge, Corrugated and Beaded Roofing, Siding and Ceiling.  
Pure Steel a Specialty.  
Send for Descriptive Catalogue.

**CROWLS PATENT STANDING SEAM STEEL ROOFING**

## LOWE & TUCKER, Chattanooga, Tenn.

—DEALERS IN—

## Pig Iron, Iron Roofing,

RAILROAD AND FURNACE SUPPLIES.



**Waltham Emery Wheel Co.,** Manufacturers, WALTHAM, MASS.

By our various processes we can guarantee satisfaction for the greatest variety of work.  
**EMERY WHEEL MACHINERY,** EMERY, CORUNDUM, Etc.  
These wheels can be bought of our agents or ordered direct.

IRA DIMOCK, Pres.

Established 1867.

J. L. OTIS, Treas.

## Northampton Emery Wheel Co.

MANUFACTURERS OF **Premium Solid Emery** AND **CORUNDUM WHEELS,** AND ALL KINDS OF **Emery Wheel Machinery.** LEEDS, MASS.

WESTERN BRANCH: 20 SOUTH CANAL STREET, CHICAGO, ILL.

## The Norton Patent Emery and Corundum Wheels



Contain Nothing but Cutting Properties.  
Are Free from Dust or Smell.  
Will not Glaze or Fill Up.  
Are of Great Endurance on Hard Work.  
**WILL RUN EQUALLY WELL WET OR DRY.**

Complete illustrated catalogue mailed free upon application, containing full particulars in regard to

**EMERY WHEEL MACHINERY**

AND OTHER SPECIALTIES.

**THOS. K. CAREY & BROS.**

Southern Agents, 26 Light St., Baltimore.

## PERFECTION STOVE PIPE.

**THE** only nested Pipe that is absolutely complete and ready for use without using tool or rivets.  
Cannot collapse or spread, thus insuring a perfect fit.  
Twenty-five joints in a small crate.

Manufactured by  
**DETROIT ELBOW CO.**  
Detroit, Mich., and St. Louis, Mo.

OPEN. LOCKED.

**THE CANTON STEEL ROOFING CO., CANTON, O.**

MANUFACTURERS OF **PATENT FOLDED LOCK SEAM STEEL ROOFING, CORRUGATED IRON,** CRIMPED EDGE IRON ROOFING AND SIDING, BEADED IRON SIDING & CEILING, IRON FRAME BUILDINGS, IRON DOORS & SHUTTERS, ROOFING PAINTS, WATER PROOF SHEATHING PAPERS, & C.

SEND FOR CATALOGUE. SAMPLES & PRICE LIST.

## Eastern Lumber Markets.

[Special Cor. MANUFACTURERS' RECORD.]

NEW YORK, July 8, 1890.

The lumber markets of the North are just now a little quiet, but prices are strong, and for several reasons, the chief one being that the production of lumber is not in excess of the demands of the markets. In the next place, lumber manufacturers are determined to have what their lumber is worth, and are perfectly willing that those who are not shall have all the trade they can capture. In other words, there is a conservative feeling prevalent, which forbids any serious cutting of rates on any kind of lumber this season. It does not seem at all probable that the supply of lumber, either here or in the South, will assume such proportions as to generate a spirit of competition or allow of any reduction in prices. Lumber of all kinds is now selling at as low prices as safe business management will permit.

A large amount of building is in progress, and from all that can be gathered, it is probable that the demand for lumber from this source will increase. The railroad companies, East and West, have been large buyers within the past few days, and parties representing railroad buyers intimate that a great deal of lumber will be bought during the summer, to store for future use. The general impression in lumber trade circles is that prices are at their lowest possible point, and that there are several influences now at work, which may bring about an advance.

With regard to white pine the supply is large, but there is no attempt made to court business at anything under current rates. This is an exceptional condition of things. Hemlock prices are firmly maintained, and the moderate receipts go into consumption. Spruce is arriving in limited quantities, most of the product being absorbed in New England markets.

Yellow pine is arriving in moderate supply from the Gulf and South Atlantic ports; most of it goes into use at once. The coastwise shipping facilities are not equal to the demand, and it may be some weeks before the orders recently placed can be filled. Meanwhile, dealers here assure their customers that they will be able to keep them well supplied.

As usual, a large business is being done in North Carolina pine. The supply will soon be largely increased, as new mills are going up and new drying kilns are being erected. It is evidently the intention of the lumber interests in that State to meet all demands made upon them.

In reference to hardwoods, nothing new has occurred to alter the satisfactory condition of things heretofore reported. Plain oak, as usual, is dull, but quartered oak is selling well at full prices. Ash is in moderate supply. Cherry is arriving from Pennsylvania and the West, and meets with good sale. Walnut logs are in demand in foreign markets. The planing mills are running full time, and meeting with a good demand for building material. Shingles and lath are in good supply. There is nothing to indicate the probability of a change in the lumber situation for some weeks to come.

## Important to All Corporations.

Every Incorporated Company should USE KAUFFMAN'S Copyrighted Forms of Improved Record Book, Transfer Book, Stock Register, Stock Ledger and other valuable Books. Write for Descriptive Circular. Address

**CORPORATION BOOK CO.**

P. O. Box 384, Lancaster, Pa.



**THOMAS J. SHRYOCK & CO.**  
**YELLOW PINE COMMISSION MERCHANTS.**  
Correspondence Solicited.  
BALTIMORE AND WASHINGTON.

**E. B. HUNTING & CO.**  
BALTIMORE, MD.  
JACKSONVILLE and FERNANDINA, FLA.  
and SAVANNAH, GA.

WHOLESALE MERCHANTS  
AND MANUFACTURERS OF

## Yellow Pine Lumber

Buy for cash on cars at Mills and sell delivered to all points reached by rail or water. Write Baltimore Office.

**J. H. WILEY**  
GADSDEN, ALABAMA.

LARGE BODIES OF  
**Iron, Coal and Timber Lands**  
FOR SALE.

Correspondence Solicited.

**J. A. HOOVER,**  
P. O. Building, MORRISTOWN, TENN.

## Real Estate Agent.

Lands bought and sold on commission.

Hardware and Gun Trade: Quote our

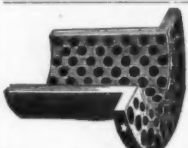
## \$5 Clay Pigeon Trap.

Electrotypes furnished gratis for catalogues.  
Liberal commissions. 80-page book free. Address  
**LIBOWSKY CLAY PIGEON CO. CINCINNATI, O.**

**BROWN BROS. & CO.**  
Manufacturers and Dealers.

**General Cotton Mill Furnishers.**  
Fitting out of New Mills a Specialty.  
**PROVIDENCE, R. I.**

**Bobbins, Spools, Shuttles,**  
AND ALL MANUFACTURERS' WOOD SUPPLIES  
AND SPECIALTIES IN MILL TRADE.  
**The GREENE & WOOD MFG. CO.**  
NEW BEDFORD, MASS.



## OILLESS BEARINGS.

They will run for years without oil. Perfectly clean. No cutting or danger of fire from overheating. Send for New Circular of interest to users of Loose Pulleys.

North American Metal Co., 37 Bleeker St., N.Y. City.

**Carpet A. B. COLLEN,**  
P. O. Box 490, New York.

Send for Price List and Catalogue. **Cleaning Machinery.**

**CHICKASAW IRON WORKS,**  
MANUFACTURERS OF  
**Wrought and Cast-Iron Work**  
FOR BUILDINGS.  
Prismatic Tiling, Ventilators, Roof Trusses, &c.  
MEMPHIS, TENN.

**OLNEY BROTHERS,**  
N. E. Agents for  
**Binghamton Cylinder & Spindle**  
AND DEALERS IN  
**Sperm, Lard, German, Spindle and Wool**  
**OILS**  
140 CONGRESS ST., BOSTON, MASS.

**JOHNSON, SHRYOCK & CO.**  
**HARDWOOD COMMISSION MERCHANTS.**  
Correspondence Solicited.  
Office, - Shryock Building,  
BALTIMORE.

**F. H. DAVIS & CO.**

Dealers in New and Second-Hand

## Paper Mill Machinery

No. 101 Milk Street, Boston.

## Gem Spring Hinges.

SINGLE  
AND  
DOUBLE  
ACTING.



FOR  
SCREEN,  
MEDIUM  
AND  
HEAVY  
DOORS.

FOR DOORS.	Length of Flanges.	Single Acting.	Double Acting.	Single Acting.	Double Acting.
Feet.	Inches.	pr. pair.	pr. pair.	pr. pair.	pr. pair.
6x2	3 1/4 10 1 1/4	\$0 70	\$1 40	\$2 00	\$3 75
7x2	1 10 1 3/4	0 90	1 75	2 50	4 75
7x3	1 10 1 3/4	1 10	2 20	3 00	5 75
7x2 1/2	1 10 1 3/4	1 40	2 80	3 75	6 75
8x3 1/2	1 10 1 3/4	1 75	3 50	4 50	8 25
8x3	1 10 1 3/4	2 50	5 00	5 50	10 50
9x3	1 10 1 3/4	3 50	7 00	7 50	14 25
10x3	2 10 1 3/4	4 50	9 00	10 00	18 00

MANUFACTURED BY  
**VAN WAGONER & WILLIAMS CO. New York**  
Send for April (1890) Catalogue

**COMBINED ANVIL AND VISE.**  
HARDENED FACE, STEEL JAWS.  
5 SIZES--from 10 to 75 pounds.



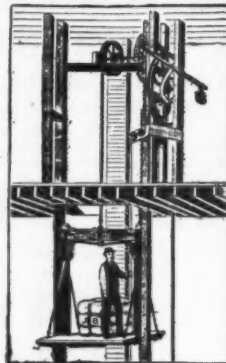
Anvil and Vise can be used independent of each other.  
Illustrated Catalogue to all applicants, but discount to Trade Only.

**HOLT MANUFACTURING CO.,**  
1015 & 1020 First Av., Cleveland, O.  
EASTERN AGENTS--MONTGOMERY & Co., 105 Fulton St., New York. WESTERN AGENTS--M. M. Buck & Co., St. Louis, Mo.  
Discount to Trade only.

## Bates' Hand Elevators

Pat. April 18, 1871. Released July 25, 1876.

OVER 6,000 IN USE.



Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions and every place where merchandise, &c. is transferred from one story to another.

**JAMES BATES,**  
PATENTEE,  
Nos. 1, 3 & 5 President Street, BALTIMORE.



**The Jeffrey Mfg. Co.**  
121 W. State St., Columbus, O.

MANUFACTURERS OF  
**DETACHABLE CHAIN BELTING**  
DESIGNED FOR  
**Elevators, +  
Conveyers,  
DRIVING BELTS**

For Handling Barrels, Boxes, Bales, Grain, Coal, Ores, &c.

Illustrated 1890 catalogue sent on Application.

Correspondence solicited.

**JOYCE, CRIDLAND & CO.**  
DAYTON, O.

MANUFACTURERS OF

J. O. Joyce's Patent Lever Jack,

Compound Lever

**SCREW JACKS,**  
AND BENCH VISES.

50 varieties of Lever and Screw Jacks for railroad use. Please send for illustrated catalogue.

## COTTON SEED OIL MILLS.

From 5 to 50 tons daily capacity.  
THESE MILLS HAVE ALL THE MODERN IMPROVEMENTS AND PRODUCE THE MOST SATISFACTORY RESULTS. SEND FOR PARTICULARS.  
ADDRESS **H.W. HUBBARD, ATLANTA GA.**  
OR DALLAS, TEX.

**GLOBE**  
STANDING SEAM IRON ROOFING & CORRUGATING CO.  
CINCINNATI, O.

MANUFACTURERS OF SUPERIOR GRADES

**CORRUGATED IRON & STEEL**  
ROOFINGS SIDINGS AND CEILINGS.  
CORRESPONDENCE SOLICITED WITH DEALERS OR THOSE CONTEMPLATING BUILDING.  
ESTIMATES AND PRICES FURNISHED PROMPTLY.

## RICHMOND IRON PAINT CO.

WEATHERPROOF, WATERPROOF AND FIREPROOF.  
Never Cracks, Blisters or Peels. Especially adapted for Tin, Zinc, Copper, Iron, Shingles and Board Roofs.



DAMP AND IMPERFECT WALLS ARE ALSO RENDERED DRY BY THE USE OF THIS PAINT AND CEMENT.  
Agents wanted for the State of Maryland and all unclaimed territory in the South.  
**N. T. PATE & CO., 1007 E. Cary St., Richmond, Va.**  
Gen. Agency "Vulcan Fire-Proof and Solter's" Paints.

**PURE WATER FROM IRON RUSTLESS PIPES.**

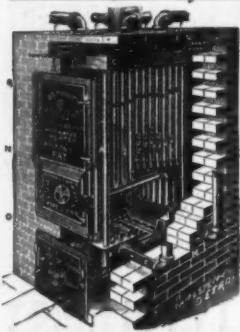
The best for conveying water.

MADE BY THE  
**WELLS RUSTLESS IRON CO.**  
52 JOHN STREET,  
NEW-YORK CITY.

BUY AND SELL Second-hand Saw, Stave, Hoisting, Shingle, Hoop Mills, Engines, Boilers, Churn and Ice Machinery, for CASH. Address Box 116, Cleveland Ohio.



6. 6.      6. 6.  
 —————  
**SIX MEN**  
 Cannot do as Much Work  
 by Hand as  
**ONE MAN**  
 Can do on our  
**BELDEN IMPROVED**  
**UPRIGHT**  
**Power Hammer.**  
 Satisfaction Guarant'ed.  
**The Belden Machine Co.**  
**NEW HAVEN, CONN.**



# BOLTON HOT WATER HEATER.

Best for Warming Dwellings, Greenhouses, Schools, Hospitals, Etc.  
Most Economical, Durable and Easily Managed  
Safe and Cleanly.  
Best Record for Years  
of Service in Canada and the Blizzard Northwest.  
The Favorite in the Mild Climate of the Gulf States.  
Its Vertical Circulation renders its action prompt and rapid. Its Fire Surface is the largest in proportion to grate surface.  
No Bolted, Flanged or Packed Joints, therefore cannot leak. Its Brick Casing prevents loss of heat in cellar.  
Made of Wrought Iron, therefore cannot crack.

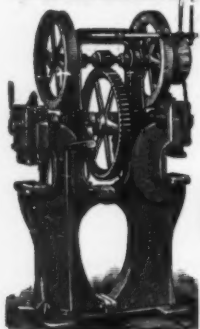
**DETROIT HEATING & LIGHTING CO.**  
88 Lake Street, CHICAGO. 359 Wight Street, DETROIT.

SEND FOR CIRCULARS.

**STANDARD RADIATORS,**  
ALL SIZES.  
Discounts to the Trade.



**COMBINATION GAS MACHINE.**  
BEST INDEPENDENT GAS APPARATUS  
for Country and Suburban Residences,  
Churches, Schools, Stores, Hotels, &c.  
Over 20 years in use with never an  
accident.  
Average Cost of Gas  $\frac{1}{2}$  Cent per  
Hour per Burner.



Small Double Machine.

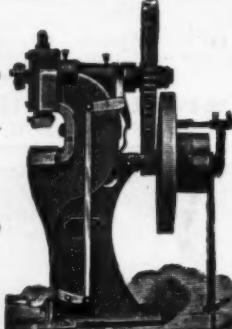
THE  
**Long & Allstatter Co.**  
HAMILTON, OHIO.

Double, Single, Angle-Bar, Gang, Horizontal, Twin, Boiler, Spacing, Gate, Multiple, BELT and STEAM-DRIVEN

**Punches and Shears,**  
Over 300 Sizes.

ALSO  
POWER CUSHIONED  
**HAMMER.**

Send for New Catalogues.



Small Single Machine.

## Laundry Machinery:

LARGEST STOCK. LATEST IMPROVEMENTS. FULLEST LINE.

Washing Machines,  
Ironing Machines,  
Centrifugal Machines,  
Mangles, Wringers, &c.  
BOILERS AND ENGINES.

—OUTFITS FOR—  
Hotels and Public Institutions.

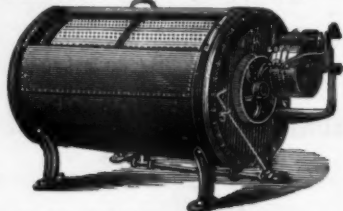
A SPECIALTY.

**THE A. M. DOLPH CO.**

222 WASHINGTON STREET,  
CHICAGO, ILL.

40 CORTLANDT STREET,  
NEW YORK.

COR. 9TH ST. & FREEMAN AVE.  
CINCINNATI, O.

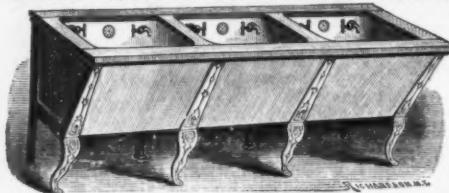


## STEWART CERAMIC COMPANY,

312 PEARL STREET, Corner Peck Slip, NEW YORK.

SOLE MANUFACTURERS, UNDER MORAHAN'S PATENTS, OF THE CELEBRATED

## SOLID WHITE CROCKERY STATIONARY WASH TUBS.



SHOWING THREE TUBS SET UP.  
Liberal Terms to the Trade. Send for Price List and Catalogue.

The Only Perfect Sanitary Tubs now in Existence. Very Strong. No Seams to Open. Absolute Cleanliness secured for all time. Well Glazed. Will not Absorb, Leak or Decay. The only Solid White Crockery Wash Tub ever made in the world. Do not buy imitations until you see the genuine "Morahan's Patent" stamped on the front of every Tub. Washboard and Soap Cup moulded in every set. Will outlast any house. Solid White Crockery Sinks, comprising Butler's Pantry, Kitchen, Shop, Etc. Made of same material as the Tubs. Very strong, well glazed, no labor required to keep clean.

## MILNER & KETTIG,



**BIRMINGHAM, ALA.**

WRITE FOR CATALOGUES AND PRICES.

Prices guaranteed as low as any house in this line in the United States.

**NIAGARA STAMPING & TOOL CO.** Cor. Superior & Randall Sts.  
BUFFALO, N. Y.

**Tinners' Machines and Tools for working Sheet Metals, &c.**  
**Squaring Shears, Circle Shears,**  
**PRESSES, DIES, Etc.**



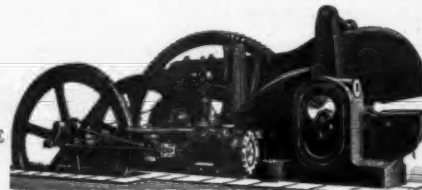
Tinners and others, we offer you the best Snips ever made. We make five sizes:

No.....	10	9	8	7	6 1/2	No.....	10	9	8	7	6 1/2
Cut.....	2 1/2	3	3 1/2	4	4 1/2	Price.....	\$1.40	\$1.50	\$2.00	\$2.50	\$3.00
Weight	1	1 1/4	2	3	4	Postage.	18	25	36	48	70 cts

We cannot send the Snips C. O. D.; it would cost 25 cents for return charges. Send your money by Postal Order, Postal Note, Money Order, or Postage Stamp.  
Send for our complete Illustrated Catalogue and Price List, and mention this paper.

**The LLOYD BOOTH CO., Youngstown, Ohio.**

GUIDE,  
BAR,  
MUCK,  
SHEET  
AND PLATE  
MILLS.



SQUEEZERS,  
SHEARS,  
ORE MILLS,  
ROLL LATHES,  
SAND AND  
CHILL ROLLS.

**Manufacturers of IRON AND STEEL WORKS MACHINERY.**

**Salem Foundry & Machine Shop**

—SALEM, MASS.—

## ELEVATORS,

—AUTOMATIC HATCH DOORS, AUTOMATIC LOCK GATES.—

Send for Illustrated Circular.

**CHARLES BURGESS,**

MANUFACTURER OF ALL GRADES OF

## CRUCIBLE TOOL STEEL

Including SELF-HARDENING STEEL for NAILERS', LATHE and PLANER TOOLS.

Warranted Equal to any Brand Made.

Extra Quality Cast Steel for Shears and all special tool purposes.

CYCLOPS STEEL WORKS, Titusville, Pa.

THREE TON

**\$35.**

Other sizes proportionately low.



Illustrated  
Catalogue  
FREE.

**OSGOOD STANDARD SCALES**  
Sent on Trial.  
FREIGHT PAID. FULLY WARRANTED.

Satisfaction Guaranteed, or No Sale.

**OSGOOD & THOMPSON, Binghamton, N. Y.**





Ad  
Ad  
Ah  
Am  
All  
All  
Alu  
Am  
Am  
Am  
r  
Am  
Am  
Am  
An  
Arc  
Arc  
Arc  
Ash  
Ati  
Aul

Bah  
Bah  
Bah  
Bah  
Bar  
Bar  
Bar  
Bar  
Bas  
Bat  
Bay  
Bea  
Bea  
Bed  
Bel  
Ber  
Ben  
Bic  
Big  
Mire  
Blai  
Bly  
Bog  
Bos  
Bos  
Box  
Box  
Bra  
Bra  
Bro  
Bro  
Bru  
Bud  
Bud  
Bud  
Bull  
Burr  
Burr  
Bus  
Bus  
Bye  
Bye

Cald  
Cail  
Cam  
Cam  
Cam  
Can  
Can  
Caro  
Caro  
Caro  
Caro  
Carl  
Cart  
Cast  
Cha  
Ch.  
Cha  
Cha  
Cha  
Cha  
Che  
Che  
Ch.  
Ch.  
Chi  
Chi  
Chr  
Cinc  
Clar  
Clari  
Clari  
Clev  
Clev  
Clev  
Clev  
Clev  
Rai  
Clev  
Cobb  
Coe &  
Collie  
Collie  
Conn  
Conti  
Conas  
Cool  
Cope  
Corde  
Core  
Corp  
Corti  
Cover  
Cox,  
Crav  
Cresc  
Crest  
Cristi  
Cycl

Della Davis



[FOR "CLASSIFIED INDEX," SEE PAGE 2.]



# Western Block Co.

LOCKPORT, N. Y.

## "Anvil" Brand Trackle Blocks and Sheaves,

For Manila or Wire Rope, or Chain.

---

### FOR THE BEST MILL

FOR GRINDING AND DISINTEGRATING

## Phosphates, Clays,

MINERAL AND ALL DRUG MATERIALS

CORRESPOND WITH

Stedman's Foundry & Mach. Wks., Aurora, Ind.

---

## New Doty Manufacturing Co.

JANESVILLE, WIS.

Manufacturers of Hand and Bolt Power

### Punching and Shearing Machinery,

BOILER MAKERS' ROLLS, &c.

---

## ROCK DRILLS



### AIR COMPRESSORS &

GENERAL MACHINERY

### MINING, TUNNELING,

QUARRY & HARBOUR WORK

RAND DRILL CO. 23 PARK PLACE, NEW YORK

---

## VAN DUZEN

### GAS & GASOLINE ENGINE



OPERATED WITH COAL  
AND OTHER MANUFACTURED  
GASES AND  
GASOLINE.

**RELIABLE AND  
ECONOMICAL.**

Fully Warranted

VAN DUZEN  
Gas & Gasoline Engines Co.  
50 E. 24 St., Cincinnati, O.

---

## WEST POINT BOILER WORKS

*Boilers with  
our Patent  
Slopes*

*Manhole  
and Plate  
in each.*

*And all  
kinds of  
Sheet Iron  
Work made  
to Order*

**R. MUNROE & SON**

23rd & Smallman Sts., Pittsburgh, Pa.



**W. A. RICHARDSON & CO.**  
 MANUFACTURERS OF STANDARD MEASURING  
**CLOTH FOLDERS AND COTTON WINDERS,**  
 For Print and Dye Works, Bleacheries, Cotton, Gingham, Delaine Mills, Etc.  
 P. O. Box 204. **WORCESTER, MASS.**

**Cotton and Woolen Mill Supplies.**

**WATERS & GARLAND,**

433 Main Street,

LOUISVILLE, KY.

Bobbins, Shuttles, Card Clothing, Roller Cloth, Dyestuffs, Sheep, Calf and Lamb Roller Skins, Ring Travelers, Reeds, Heddles, Banding, Tape, Lace Leather, Belting, Oils, etc.  
 Write for Discounts.

**NYE & TREDICK**

MANUFACTURERS OF

Automatic Circular Rib

**Knitting Machines**

FOR

Plain and Fancy Ribbed Underwear, Skirts, Caps, Jackets, Jerseys, Leggings, &c.

AGENTS FOR THE

**KEYSTONE KNITTER,**

FOR

**SEAMLESS HOSIERY.**

Winders, Loopers, Steam Presses, Hosiery and Shirt Boards, &c.

ADDRESS

**NYE & TREDICK, 608 Arch Street, Philadelphia, Pa.**

**NOW READY.**

The third annual edition of the **BLUE BOOK**, a Directory of the Textile Manufacturers, of the United States and Canada, comprising Cotton, Woolen, Silk, Jute and Linen Manufacturers, Dyers, Bleachers and Print Works, Dry Goods Commission Merchants, Treasurers' Offices, City Offices and Salesrooms of Manufacturing Companies, etc. It gives the name of Place, County, Railroad, Telegraph and Express, name of Proprietor or Company Officers, Mill Agent and Superintendent, number of Cards, Combs, Looms, Spindles, Knitting and Sewing Machines, Boilers and Water-wheels. If Dye House or Color Tub. Specialty and full description of Goods made, name of Selling Agents, or if sell own goods wholly or partly, and if to Wholesale, Retail or Jobbers. If buy yarn, kind used. A list and full particulars of all New Mills under construction with expected date of completion, etc. Handsomely and compactly printed in medium sized type one-third the price of the larger directories. The cheapest and most complete book published; a Reliable Ready Reference Book for the Office, and its size, 7x4, is convenient for the Traveling Salesman.

Prices, Postpaid, Bound in Cloth, \$2.00; Russia Leather, \$2.50.

J. E. PALMER & CO., 176 Broadway, New York.

ROMPTON 1888 WOOL COMBS  
**CRUMPTON Loom Works**  
 WORCESTER, MASS. COTTON, WOOLEN, SILK, TAPE & CARPET LOOMS

**JACQUARD MACHINES.**

We make a specialty of furnishing Jacquard Machines with harnesses already tied up, ready to draw in the warps. Also designs and cards. Send for estimates.

**SCHAUM & UHLINGER,**

Successors to W. F. UHLINGER,

Greenwood Avenue and Second Street, Philadelphia, Pa.

**VAN WINKLE GIN & MACHINERY CO.**

ATLANTA, GA., and DALLAS, TEX.

MANUFACTURERS OF



**COTTON GINS, FEEDERS,**

CONDENSERS AND PRESSES,

**COTTON-SEED OIL MILLS,**



SHAFTING, PULLEYS, WIND MILLS, TANKS, PUMPS, Etc.

**Cotton-Seed Oil Machinery.**

**GET THE BEST.**

*Presses, Pumps,*

*Cake Formers, Meal Heaters,*

*Chilled Roll Crushers,*

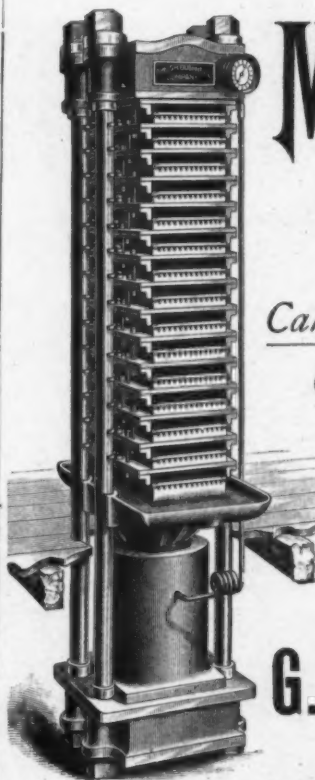
*Etc.*

Send for Cuts and Prices.

THE

**G. H. BUSHNELL CO.**

THOMPSONVILLE, CONN., U. S. A.



IMPROVED HYDRAULIC PRESS.

Our Oil Presses are fitted with Tiffany Oil Mats, Steel Boxes, Cast Steel Cylinders.

**NONE BETTER.**

**THE BEST IS THE CHEAPEST.**

**JUST ISSUED.**

**The Textile Manufacturers' DIRECTORY of the United States and Canada**

COMPRISING WOOLEN, COTTON, SILK, JUTE, FLAX AND LINEN MANUFACTURERS,

Dealers and Brokers in Raw Material. Dry Goods Commission Merchants and Jobbers,

CITY OFFICES AND AGENCIES OF MANUFACTURING COMPANIES AND DYERS OF TEXTILE FABRICS.

H. H. BABCOCK, Treasurer and General Manager.

Published and for Sale at 320 and 322 BROADWAY, N. Y.

PRICE \$5.00



# AMERICAN SUPPLY CO.

Formerly MYRON, FISH & CO., of Valley Falls, R. I., and KENDRICK, LOOM HARNES CO., of Providence, R. I.

MANUFACTURERS OF

## LOOM HARNES AND REEDS

OAK BELTING, LACE AND PICKER LEATHER,

And Dealers in Supplies for Cotton, Woolen and Silk Mills.

Agents for JOSEPH NOONE'S SONS'  
Roller, Slasher and Clearing Cloths.

Agents for —  
Roddick's Patent Improved Oil Cans.

Calif, Sheep and Lamb Roller Skins and  
ROLL COVERERS' TOOLS.



WIRE GOODS OF ALL DESCRIPTIONS.

AND  
WIRE HEDDLES

Shuttles and Heddle Frames,

FOR FURNISHING

We Have Unequalled Facilities

SPECIAL NOTICE TO WORSTED AND SILK MILLS.—We manufacture both Worsted and Cotton Machine-Knit Mall Harness for Weaving Fine Worsted and Silk Goods. Also a full line of Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, PROVIDENCE, R. I. FACTORIES: PROVIDENCE and VALLEY FALLS, R. I.

A. D. LOCKWOOD, Pres.

JOHN KENDRICK, V.-Pres.

MYRON FISH, Treas.

JOHN A. CARTER, Secty.

JOSEPH H. KENDRICK, Gen. Agent.

## The BEST COTTON-SEED OIL PRESS IN THE MARKET

Boxes Made Entirely  
of Steel.

CAPACITY:

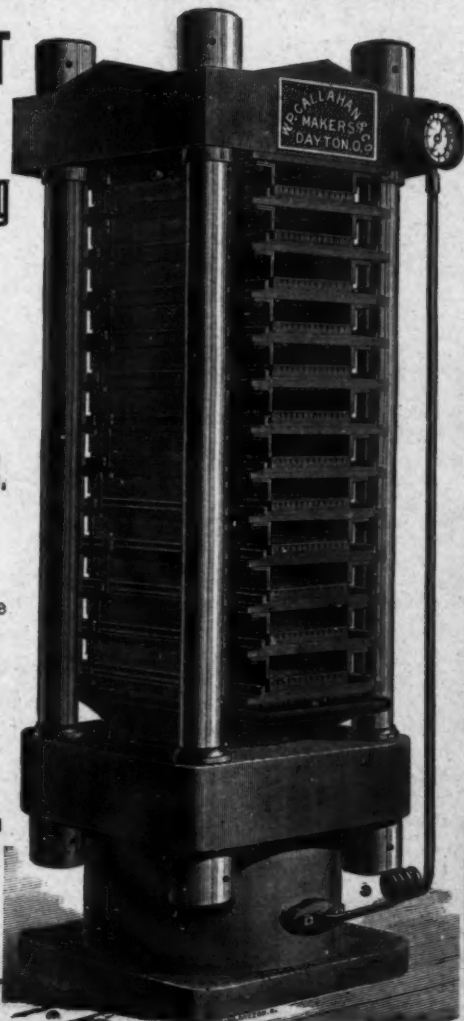
12 Tons in 24 Hours.

Parties contemplating the  
erection of Cotton-Seed  
Mills should  
address

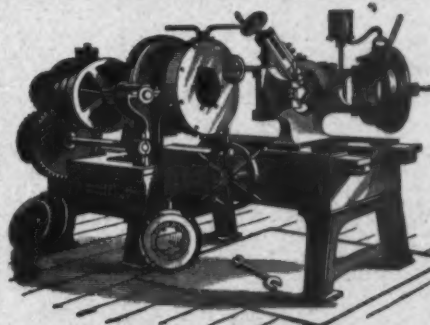
W. P. Callahan & Co.

DAYTON,

OHIO.



## D. SAUNDERS' SONS



SEND FOR CIRCULARS.

MANUFACTURERS OF  
Pipe Cutting and  
Threading Machines,  
For Pipe Mill and Steam  
Fitters' Use.  
Tapping Machines  
For Steam Fitting. Also,  
STEAM AND GAS FITTERS  
HAND TOOLS,  
Atherton Street,  
Send for Catalogue B.  
YONKERS, N. Y.

WROUGHT IRON PIPE—FITTINGS—BRASS AND IRON COCKS AND VALVES, SUPPLIES.  
STEAM AND GAS FITTERS' TOOLS—PIPE COILS AND RADIATORS—ENGINEERS' SUPPLIES.  
STEAM GLUE HEATERS—IRON AND BRASS RAILING FITTINGS—THE AMERICAN UNION.  
AT THIS SEASON OUR AWNING-FRAME FITTINGS ALWAYS HAVE A "BOOM" AS ANY ONE CAN BE USEFUL IN THEM.  
DO YOU USE OR DEAL IN ANY OF THESE GOODS? OR DO YOU WISH TO KNOW ANYTHING ABOUT THEM? IF YOU DO MENTION THIS ADVERTISEMENT WHEN YOU ADDRESS PANCOAST & MAULE, PHILADELPHIA, PA.

# BUY THE BRUSH

Then you will have the best of all

## Electric ★ Apparatus

Write immediately for a catalogue regarding

### Arc AND Incandescence, BRUSH LIGHTS AND MOTORS.

**The Brush Electric Co.**  
CLEVELAND, O.

#### THE WEST SYSTEM OF Improved Sewerage.

Sewage Disposal Without Offence.

**NO SEWER GAS.**

Officials or other Responsible Parties please  
Send for Pamphlets.

**The National Sewerage & Sewage Utilization Co.**  
280 Broadway, New York.



#### JENKINS BROS.' VALVES.

**E**very valve tested and warranted, all parts interchangeable.  
**N**othing but best Steam Metal used in the manufacture.  
**K**eyed Stuffing Box and Disc Removing Lock Nut  
**I**s used only in the Jenkins Bros.' Valves.  
**N**one are genuine unless stamped with "Trade Mark."  
**S**hould you order **INSIST** on having Jenkins Bros.' Valves.

71 John St., New York.  
21 N. Fifth St., Philad'a.  
54 Dearborn St. Chicago  
105 Milk St., Boston.

CENTRIFUGAL  
ROTARY AND PISTON  
PUMPS.

Also HOUSE PUMPS.

# PUMPS

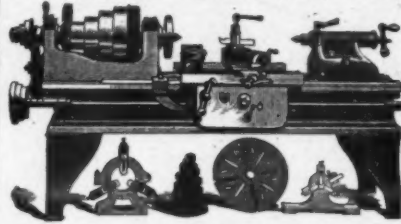
FIRE ENGINES,  
HOOK AND LADDER  
TRUCKS  
And HOSE CARS.

Send for Catalogue.

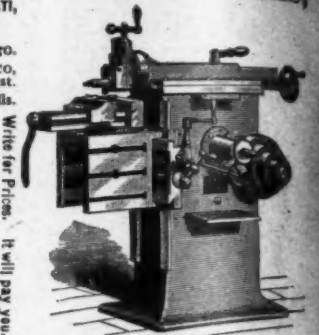
**RUMSEY & CO., Limited,**  
Seneca Falls, N. Y., U. S. A.

#### SHAPERS, ENGINE LATHES AND DRILLS, THE LODGE & DAVIS MACHINE TOOL CO., CINCINNATI, OHIO.

EASTERN HOUSE: 64 Cortlandt St., New York  
WESTERN HOUSE: 68 & 70 S. Canal St., Chicago.  
Boston, Phila. St. Louis, San Francisco.  
23-25 Purchase st. 19 N. 7th st. 823 N. 2d st. 12 California st.  
22", 24" Upright Drills. 25", 28", 32", 40", B. G. B. F. Drills.



17", 19", 21", 24", 27", 32", 38" ENGINE LATHES.



15 & 20-INCH CRANK SHAPER.

#### Miller Safe & Iron Works,

MANUFACTURERS OF

FIRE AND BURGLAR-PROOF

## SAFES.

33 Years' Record and no Failures.

23,000 NOW IN USE AND

TESTED IN OVER 300 FIRES.

Salesroom, 24 W. Baltimore Street, Baltimore, Md.

Factory, South Baltimore.

#### A. WYCKOFF & SON, ELMIRA, N. Y.

MANUFACTURERS OF

#### \* WOOD WATER PIPE



FOR  
Coal and Iron Mine  
COKE WORKS  
AND  
General Water  
SUPPLY.

SEND FOR  
CATALOGUES AND  
PRICES.

THE STANDARD TOOL COMPANY, Cleveland, Ohio.



Manufacturers of Bit Stock Drills, Straight Shank Drills, Taper Shank Drills,  
Taper Reamers, Milling Cutters, Chucks, Hatchet Drills, Screw-Drivers,  
Bits, Twist Drill Grinding Machines.

Use Our **No. 6 1-2 AXLE** For Trucks, Express and Delivery Wagons.  
CLEVELAND AXLE MFG. CO., Cleveland, Ohio.



**THADDEUS S. COBB & CO.**  
MANUFACTURERS' AGENTS AND DEALERS IN  
**MACHINERY** OF EVERY DESCRIPTION.  
36 Central Street, Lowell, Mass.



# Buffalo Forges

BLOWERS & EXHAUSTERS.  
HEATING FURNACES, HAND BLOWERS,  
AND BLACKSMITH DRILLS.

**BUFFALO FORGE CO.**  
BUFFALO, N. Y.

Before Purchasing Elsewhere write us for Catalogue and Prices.

**The KILBOURNE & JACOBS MFG. CO.**

COLUMBUS, OHIO, U. S. A.

